



EXTENSION STUDY

Lewis & Clark National Historic Trail

July 2016



Intentionally left blank



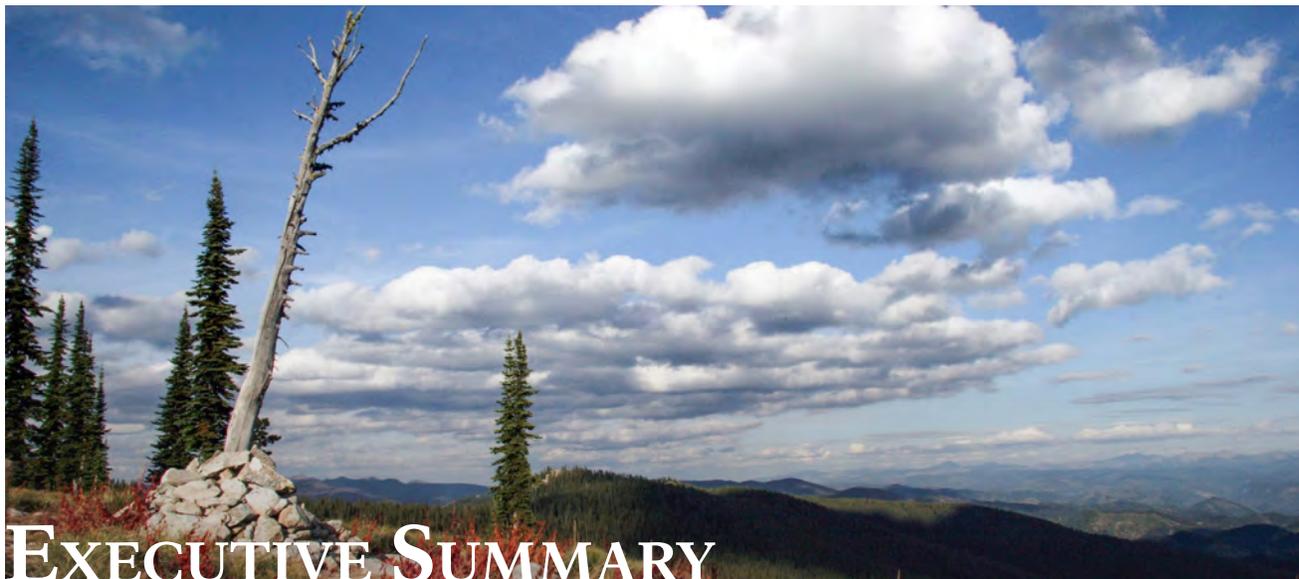
EXTENSION STUDY
Lewis & Clark National Historic Trail
July 2016

Contents

Executive Summary.....	1
Purpose and Need	1
Evaluation of National Significance, Feasibility, and Suitability	2
National Significance	2
Feasibility.....	3
Individual Sites	5
Impact on Tourism.....	6
Alternatives	6
Alternative A (No Action)	6
Alternative B	6
Environmental Assessment	7
Consultation and Coordination	7
Conclusion and Next Steps.....	8
Public Comment	8
Chapter 1: Purpose and Need	9
Introduction.....	9
Legislative History/Project Background	10
Purpose and Need	10
Purpose	10
Need	10
Impact Topics	11
Impact Topics Analyzed in Detail.....	11
Impact Topics Considered but Dismissed from Further Analysis	11
Chapter 2: The Existing Lewis and Clark National Historic Trail	13
Trail Description.....	13
Purpose and Significance of the Lewis and Clark National Historic Trail...	15
Primary Interpretive Themes.....	16
Theme 1: Growth of a Young Nation	16
Theme 2: Documenting Observations of Natural Science	16
Theme 3: Encountering Indigenous Peoples.....	16
Theme 4: Unity through History	17
Theme 5: Traces of the Past Observed Today	17
Special Mandates.....	18
Fundamental Resources and Values	18
Historic Route and Associated Natural History	19
American Indian Tribes and Tribal Cultural Resources	19
Critical Supporting Resources	19
Partnerships.....	19
Primary Documentation.....	19
Trail Administration	20
Lewis and Clark National Historic Trail at a Glance	20

Chapter 3: Evaluation of National Significance and National Trails System Act and National Historic Trail Criteria	21
Introduction.....	21
Study Methodology.....	22
Period of Significance and Timeline	22
Evaluation of National Historic Trail Criterion 11A.....	25
Summary Findings for Criterion 11A.....	26
Conclusion	26
Evaluation of Criterion 11B.....	34
Conclusion	35
Evaluation of Required Element Three (Historic Significance/National Significance).....	36
Conclusion	37
Evaluation of Criterion 11C (Potential Use and Interest)	41
Conclusion	41
Evaluation of Individual Sites Associated with the Eastern Legacy	42
Conclusion	42
National Significance Conclusion.....	43
 Chapter 4: Evaluation of Feasibility and Suitability	45
Introduction.....	45
National Historic Trail Required Elements.....	46
Conclusions Regarding Feasibility and Suitability.....	56
Feasibility.....	56
Suitability	57
Impact on Tourism.....	58
Analysis.....	58
Conclusion	59
 Chapter 5: Alternatives	61
Introduction.....	61
Trail Administration and Management.....	62
Alternatives	63
Alternative A: No Action (No Trail Extension is Designated)	63
Alternative B: Designate the Lewis and Clark National Historic Trail Extension from Pittsburgh, Pennsylvania to Wood River, Illinois	64
Alternatives Considered but Eliminated from Detailed Study	67
 Chapter 6: Affected Environment	69
Introduction.....	69
Impact Topics Analyzed in Detail.....	70
Cultural Resources.....	70
Natural Resources.....	72
Socioeconomics	73
Impact Topics Considered but not Analyzed in Detail.....	75
Cultural Resources.....	75
Natural Resources.....	76
Other Impact Topics	77
Environmental Justice	77
Indian Trust Resources	77

Chapter 7: Environmental Consequences	79
Introduction.....	79
Methodology.....	80
Cumulative Impact Scenario Analysis Methodology.....	81
Cultural Resources.....	81
Natural Resources.....	83
Socioeconomics	85
Chapter 8: Consultation and Coordination.....	87
Public Involvement	87
Agency Consultation	88
US Fish and Wildlife Service.....	89
State Historic Preservation Offices	89
American Indian Tribal Governments	90
Coordination	96
National Park System Advisory Board	96
Chapter 9: References	97
Appendixes.....	99
Appendix A. Statement of Significance to the National Park System Advisory Board; Advisory Board Recommendation	99
Appendix B. Data Tables for Feasibility and Affected Environment Chapters.....	100
Appendix C. Salmon Study List of Potential Individual Sites	121
Appendix D. NHL Revised Thematic Framework.....	130
Appendix E. Further Information on the Existing Lewis and Clark National Historic Trail.....	131



Purpose and Need

The purpose of the Lewis and Clark National Historic Trail Extension Study is to evaluate eastern sites and segments associated with the Lewis and Clark Expedition (Expedition) to determine whether those sites and segments should be added to the existing Lewis and Clark National Historic Trail. As directed by Congress, the National Park Service (NPS) conducted this study in accordance with section 5(b) of the National Trails System Act (55 United States Code (USC) 1244(b)) (NTSA). According to the NTSA, a trail must be nationally significant to be added to the National Trails System (system). The trail must also be a feasible and suitable addition to the System.

Criteria 11A, 11B, and 11C of the NTSA establish the requirements a potential national historic trail must meet in order to be added to the System. A proposed trail or trail extension must be deemed nationally significant with respect to American history, and historic use of the trail must have had a far-reaching effect on broad patterns of American culture. The trail must be a route established by historic use, it must be historically significant as a result of that use, its location must be sufficiently known, and it must have significant potential for public recreational use or historical interest based on historical appreciation and interpretation.

A proposed national historic trail or trail extension must also be feasible to manage and a suitable addition to the system. The feasibility of a trail is determined on the basis of whether it is physically possible to develop a trail along a route being studied and whether the development and administration of a trail would be financially feasible. Suitability (also called desirability) considers whether a proposed trail, or trail extension, is already adequately represented within the System or is comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector. For trail extensions, suitability evaluates if there is additional public benefit to be gained by extending the trail.

In addition to assessing the criteria outlined in the NTSA, this document serves as an Environmental Assessment as required by the National Environmental Policy Act of 1969 (NEPA) and Director's Order 12: *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2012) to determine potential environmental consequences from the proposed federal action.

Evaluation of National Significance, Feasibility, and Suitability

National Significance

The NPS evaluated 25 trail segments and several historic sites in the east related to the Expedition. Of the 25 trail segments evaluated, 3 were deemed nationally significant with respect to the Expedition. These three segments are:

- **Segment 5a**, the Ohio River from Pittsburgh, Pennsylvania to Louisville, Kentucky, near the Falls of the Ohio: While in Pittsburgh, Lewis purchased the keelboat used on the Expedition and assembled his first group of recruits to man the boat. He then set off from Pittsburgh down the Ohio River to begin the water journey that was to continue for thousands of miles in search of the all-water route to the Pacific Ocean. Previous travels to prepare for the Expedition occurred on land. This was also where Lewis received the letter from William Clark, stating that he (Clark) had committed to joining Lewis on the Expedition. After leaving Pittsburgh on their keelboat, pirogue, and canoe laden with weapons and supplies, Lewis and the men (Expedition members, also referred to as the Corps of Discovery) initiated their hands-on activities that were necessary to prepare them for the hardships of the long trip west. Lewis tested his new guns and experienced difficulties and delays navigating the river, including dealing with unexpected “riffles” or sandbars that blocked the boats. It was also during this time that Lewis began taking notes on American Indian sites and began collecting specimens for the President.
- The actions of the early members of the Corps of Discovery along this route assured that their technology and techniques would work correctly to support exploration and documentation in the Louisiana Territory.
- **Segment 5b**, Louisville, Kentucky, near the Falls of the Ohio, to the confluence of the Ohio and Mississippi Rivers (near present day Cairo, Illinois): Louisville is where Lewis and Clark met for the first time since their previous collaboration during US military campaigns and joined their preliminary crews. Prior to this point, they had worked individually, but it was here that the full Corps of Discovery was formed and began to work together. They stayed in Louisville and Clarksville for several days to solidify their plans and their crew. Once back on the water, they mapped the river’s course and met American Indian tribes of the southern Illinois Territory and surrounding areas. Their activities along this stretch of river were remarkably similar to their activities along the rivers of the Louisiana Territory.
 - **Segment 6**, the Mississippi River from its confluence with the Ohio River (near present day Cairo, Illinois) to Wood River, Illinois: At the confluence of the rivers, the Corps of Discovery turned upstream for the first time and began working against the current. This would be their orientation for the next several thousand miles. The crew gained familiarity with the keelboat and pirogues in this different orientation and solved new navigational challenges. Along this segment, the explorers acted as diplomats, conversing with foreign powers who maintained rights over the land they approached. Again, their activities along this stretch of river were remarkably similar to their activities in the West.

Lewis gained a better understanding of the number of men needed for the Expedition, how to operate the new vessels, how to navigate the sandbars prevalent in the Ohio River and the Mississippi River; and refined his techniques to map, document, and investigate the surroundings.

The NPS finds that the remaining 22 preparation and return routes studied do not have the same level of significance as the routes of the established national historic trail and do not meet the criteria for national significance established by the NTSA.

Many of the remaining 22 study routes have deep local significance and may be nationally significant for reasons other than their association with Lewis and Clark (such as for their roles in American Indian history, European American and American Indian migration, military expeditions, and trade in the development of the United States). The importance of these routes is derived from uses outside the key period of Lewis and Clark's journeys from 1803 to 1807, which makes them ineligible to be added to the Lewis and Clark National Historic Trail. These routes would be most appropriate for recognition at the state and local level.

Feasibility

The three study segments identified above as being nationally significant were also evaluated for being feasible and suitable additions to the established national historic trail. Feasibility was assessed by addressing required elements 1 through 10 of section 5(b) of the NTSA (all 10 elements are required):

- 1 The proposed route of such trail (including maps and illustrations).
- 2 The areas adjacent to such trails, to be utilized for scenic, historic, natural, cultural, or developmental purposes.
- 3 The characteristics which, in the judgment of the secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails, the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 USC 461).
- 4 The current status of land ownership and current and potential use along the designated route.
- 5 The estimated cost of acquisition of lands or interest in lands, if any.
- 6 The plans for developing and maintaining the trail and the cost thereof.
- 7 The proposed federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the Department of Agriculture).
- 8 The extent to which a state or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof.
- 9 The relative uses of the lands involved, including the number of anticipated visitor days for the length of, as well as for segments of, such trail; the number of months which such trail, or segments thereof, will be open for recreation purposes; the economic and social benefits which might accrue from alternate land uses; and the estimated years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail.
- 10 The anticipated impact of public outdoor recreation use on the preservation of a proposed national historic trail and its related historic and archeological features and settings, including the measures proposed to ensure evaluation and preservation of the values that contribute to their national historic significance.

The NPS has determined that segments 5a, 5b, and 6 would be feasible to administer as an extension to the national historic trail.

Findings and supporting information for feasibility are detailed below:

- It is physically possible to establish a trail or auto tour routes along the extension routes.
 - » The actual routes used by the Corps of Discovery are well documented, and the rivers they used can still be followed today.
 - » While most of the land base along the proposed extension routes is in private ownership, trail segments on private lands could be rerouted to the road network or other locations where rights-of-way exist or can be developed.
 - » Many locations adjacent to the proposed trail could offer benefits to visitors for recreational, educational, and interpretive purposes.
 - » Expected impacts on natural and cultural resources are minimal; these impacts can be minimized and mitigated through planning and compliance with legal requirements.
- Trail designation would have minimal impact on surrounding land uses and land values because any land- or water-based trail would be compatible with most existing land uses.
- The overall costs to the government to administer an expanded trail would be substantial, but may not be prohibitive. The Lewis and Clark National Historic Trail can use existing staff and office infrastructure to begin administering a trail extension, but those existing resources would not be adequate to meet expanded responsibilities in the long term. One-time and ongoing expenses would include the following items:

- » Extending the existing trail would require additional staff for outreach, partnering, compliance, and other activities in the expanded geographic area.
- » Additional funds would be required to produce, update, and maintain publications and signs throughout the extended trail area.
- » Actual trail development costs would not be expected to be borne by the government. Rather, if these activities take place, they would need to be completed by organizations, private individuals, or local governments.
- » Please see table 5 on page 51 for more information on costs.
- No land acquisition is anticipated by the federal government, but if any land is acquired, it would be on a “willing seller basis” as authorized by Congress in the *Omnibus Public Land Management Act of 2009* (123 Stat. 997, Sec. 5301, March 30, 2009).

The NPS concludes that the proposed trail extension adding the three segments is feasible, but notes that trail development and partnering activities would be realized over time, not immediately upon designation. Designation would not guarantee that additional funding would be made available. Projects and activities would take place as funding and staffing allow. NPS administration would vary based on federal budgets, staffing levels, and partner capacity.

The NPS also finds that the proposed trail extension may not be feasible if expected partnership opportunities and Congressional funding are not realized. In this case, it would not be feasible for the existing Lewis and Clark National Historic Trail to administer additional trail segments, and any benefits from trail designation would be lessened or realized over a longer period.

Suitability

The NPS has determined that the proposed trail extension would be a suitable addition to the existing Lewis and Clark National Historic Trail. While the story of the Expedition is adequately told on the existing trail, segments 5a, 5b, and 6 would broaden the story to include preparation activities that were of national importance.

Findings and supporting information for suitability are detailed below:

- The proposed trail extension routes are nationally significant as they relate to the Expedition.
- A trail extension would aid in the interpretation of the Expedition, particularly the activities that happened in preparation for the Louisiana Territory. While these stories can be told on the currently designated trail, trail extension would increase opportunities for interpretation and education.
- A trail extension would highlight additional Lewis and Clark-related recreational opportunities along the Ohio and Mississippi Rivers.
- A trail extension would engage additional partners and stakeholders in trail management and related activities.

The NPS concludes that the three proposed extension route segments are a suitable addition to the existing trail. Other routes studied are not suitable for addition to the national historic trail, but could be appropriately recognized at the local, regional, or state level. State and local constituents are encouraged to collaborate with the NPS Rivers, Trails, and Conservation Assistance (RTCA) program to develop trail projects and community preservation projects highlighting Lewis and Clark history.

Individual Sites

The NPS also examined individual sites associated with the preparation and return phases of the Expedition, as directed by the study legislation. A National Historic Landmark (NHL) Theme Study, the “Lewis and Clark Eastern Legacy Study” by John S. Salmon (2007) identifies key sites in the east that were particularly important for the Expedition.

These sites include:

- The White House, where President Jefferson drew up the presidential orders and discussed the Expedition with Lewis, and where Lewis and Clark returned upon completion of the journey;
- Monticello, where President Jefferson and Lewis met regularly to plan the Expedition; and
- The American Philosophical Society in Philadelphia, Pennsylvania, where Lewis underwent training in the sciences to prepare himself for recording the journey

All of these sites have already been designated as national historic landmarks. Additional sites related to the preparation and return phases of the Expedition are already protected by the NPS, including the Harpers Ferry armory, the Cumberland Gap, and Meriwether Lewis’s death site (on the Natchez Trace Parkway).

The NPS finds that no further national recognition is necessary for these particular sites. Other sites related to the preparation and return phases do not meet the same standards for national significance for their relationship to the Expedition and are most appropriately protected and commemorated at the local, state, or regional level. No individual sites are eligible for addition to the Lewis and Clark National Historic Trail.

Impact on Tourism

The legislation directing this study includes the following additional requirement:

Section (B) Impact on Tourism: In conducting the study, the Secretary shall analyze the potential impact that the inclusion of the Eastern Legacy sites is likely to have on tourist visitation to the western portion of the trail.

The NPS concludes that the proposed trail extension would likely positively impact tourism on the existing Lewis and Clark National Historic Trail segments. Extension of the trail would result in additional federal, state, local, and private organizations coordinating and interpreting the Lewis and Clark story. As a result, tourism related to the Expedition would likely increase somewhat for all portions of the trail.

Alternatives

As required by NEPA, the NPS developed two alternatives for federal action. The first alternative is the no action alternative, which would continue current conditions with no additional federal involvement. The second alternative is the action alternative. If designated by Congress, the action alternative would add segments 5a, 5b, and 6 to the existing Lewis and Clark National Historic Trail, to be managed by the NPS.

Alternative A (No Action)

Under the no action alternative, there would be no federal designation of a national historic trail extension. The existing NPS management of the Lewis and Clark National Historic Trail would continue to focus the majority of its attention on the events and activities of the Corps of Discovery west of the Mississippi River, with goals of partnership formation, resource protection, and trail interpretation. Programs benefiting sites and segments related to Lewis and Clark east of the Mississippi River that are ongoing could continue, but would receive no additional resources from the NPS compared with current levels. State, local, and private efforts would remain the dominant method for interpreting the story of the Expedition in the study area.

Alternative B

Congress would designate segments 5a, 5b, and 6, the river routes from Pittsburgh to Wood River, as an extension to the existing Lewis and

Clark National Historic Trail. The additional route segments would be administered with the existing trail as one management entity. To achieve this, the purpose statement and period of significance of the national historic trail would need to be updated to reflect preparation activities in 1803 and 1804. The NPS would continue to administer the extended Lewis and Clark National Historic Trail through formal and informal partnerships with governmental agencies, nongovernmental organizations, and private landowners for resource protection, visitor experience, and education.

The NPS would take no action on these segments unless and until Congress authorizes such action.

Other alternatives were considered but dismissed from further evaluation. The NPS considered, but rejected, an alternative that would have the Secretary of the Interior designate Eastern Legacy study routes as "Connecting and Side Trails," as stated in section 6 of the NTSA. This authority is occasionally used to designate short additions to national trails, primarily as they pass through federal properties. In order to designate trails under this authority, the Secretary of the Interior must have the consent of landowners in the trail corridor, which is not feasible for an extension of this magnitude on predominantly private property. This alternative was ultimately rejected because the additional routes of the trail extension are outside the purpose and period of significance for the existing trail; therefore, adding these routes to the trail under this authority is not appropriate.

Environmental Assessment

The NPS identified several environmental resources that could be adversely affected by designating the trail extension. Those resources include:

- Cultural Resources
 - » Historic structures
 - » Archeological resources
 - » Ethnographic resources
 - » Cultural landscapes
- Natural Resources
 - » Soils
 - » Vegetation
 - » Water resources
 - » National Natural Landmarks

- Socioeconomics
 - » Land ownership and land values
 - » Tourism and regional economy
 - » Visitor use and experience

Each of these resources was evaluated against the two alternatives to assess any adverse impacts on those resources. Cumulative impacts, or changes to resources that accrue over time, were also assessed in this analysis.

Due to the conceptual nature of historic trail designation, any adverse impacts on these resources as a result of either alternative are expected to be minimal. In many cases, resources are expected to benefit from designation of the trail extension due to the additional resources that may be allocated to protect them.

Consultation and Coordination

The NPS study team has engaged interested and affected individuals, organizations, public agencies, and American Indian tribes for the purpose of effectively and responsibly accomplishing this study.

The scoping period for the study was October 19, 2010 to December 31, 2010. The NPS held nine public meetings during the scoping period to solicit comments from interested parties, and has continued to accept input throughout the study process.

This study document is being released to the public with a request for comments from individuals, groups, states, tribes, and other federal agencies. The document is available electronically on the NPS Planning, Environment, and Public Comment website at <http://parkplanning.nps.gov/eastern-legacy-srs>

A limited number of compact discs will be available upon request.

Conclusion and Next Steps

The NPS finds that three of the routes traveled by Lewis, Clark, and the Corps of Discovery in their preparation for the Expedition meet the criteria to be added to the existing Lewis and Clark National Historic Trail. The Ohio River and Mississippi River routes from Pittsburgh, Pennsylvania to Wood River, Illinois total approximately 1,200 miles and meet Congressionally established criteria for national significance, feasibility, and suitability. Other routes studied were found to be more appropriately recognized at the state and

local level, and do not meet the criteria to be added to the existing trail. The NPS feels that state and local recognition is a viable and appropriate action for all study routes.

This study is now being released to the public for additional comment. The study will be updated following public review and transmitted to Congress by the Secretary of the Interior with a formal recommendation for next steps. Congress is then responsible for final action as to any trail extension.

Public Comment

This document will be on public review for 45 days. If you wish to comment on the Lewis and Clark Eastern Legacy Trail Study and Environmental Assessment, you may post comments online at: <http://parkplanning.nps.gov/eastern-legacy-srs> or mail comments to

Tokey Boswell
NPS Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment - including your personal identifying information - may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we would be able to do so.



CHAPTER 1: PURPOSE AND NEED

Introduction

The Lewis and Clark National Historic Trail Extension Study and Environmental Assessment (study) has two primary purposes. First, it informs the United States Congress on the findings regarding suitability, feasibility, and national significance for a potential extension of the Lewis and Clark National Historic Trail. Second, the study evaluates potential impacts on natural and human environments that could result from designating the trail extension.

Upon completion, the study will be transmitted to Congress by the Secretary of the Interior with a formal recommendation. Congress is then responsible for final action as to whether a trail extension is designated.

Legislative History/Project Background

The 1968 National Trails System Act (NTSA) (Public Law 90-543) established the framework for a system of national trails, and it created three trail categories: national scenic trails, national recreation trails, and connecting or side trails. In 1978, the act was amended to create the category of national historic trails and to establish the criteria for designating said trails.

The Consolidated Natural Resources Act of 2008 (Public Law 110-229), Section 343, directed the Secretary of the Interior to conduct a study in accordance with the direction and criteria outlined in the NTSA, additional criteria outlined in the act, and other applicable laws and regulations to determine the suitability and feasibility of formally extending the Lewis and Clark National Historic Trail to include Eastern Legacy sites and segments associated with the preparation or return phases of the historic Lewis and Clark Expedition (Expedition).

The term Eastern Legacy refers to eastern sites and segments associated with the preparation and/or return phases of the Expedition. Eastern Legacy routes are those followed by Meriwether Lewis and William Clark (independently or together) prior to May 14, 1804, during the preparatory phase, and following September 23, 1806, during the subsequent return phase.

This law specifies that sites in “Virginia, the District of Columbia, Maryland, Delaware, Pennsylvania, West Virginia, Ohio, Kentucky, Tennessee, Indiana, Missouri, and Illinois” are to be studied. Routes in Mississippi and Alabama were also evaluated as part of the study due to their roles in the Eastern Legacy of the Expedition.

The National Park Service (NPS), under the delegated authority of the Secretary of the Interior, is responsible for administering the existing Lewis and Clark National Historic Trail and for conducting this study.

Purpose and Need

Purpose

The purpose of the study is to evaluate the preparation and return phases of the Corps of Discovery to determine whether an extension of the Lewis and Clark National Historic Trail meets NTSA criteria.

Need

This study is needed to accomplish the following objectives:

- Satisfy the requirements of Public Law 110-229 to study the suitability and feasibility of extending the Lewis and Clark National Historic Trail in the Eastern Legacy as outlined in section 5(b) of the NTSA (16 United States Code (USC) 1244(b)).
- Comply with the National Environmental Policy Act of 1969 (NEPA) and NPS Director’s Order (DO) 12: *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2012) to determine potential environmental consequences from the proposed federal action.

Impact Topics

NEPA is the national charter for environmental protection in the United States. Title I of the law requires that federal agencies plan and carry out their activities in a manner that protects and enhances the environment. Impacts are considered on the natural, cultural, and socioeconomic environments and are analyzed in Chapter 7: Environmental Consequences of this study.

The impact topics included in this study were chosen after evaluation by members of the NPS study team. More detailed descriptions of impact topics are found in Chapter 6: Affected Environment.

Impact Topics Analyzed in Detail

The following topics were chosen for further analysis by the NPS study team because at least one of the alternatives has the potential to have an impact on these resources:

- Cultural Resources
 - » Historic structures
 - » Archeological resources
 - » Ethnographic resources
 - » Cultural landscapes
- Natural Resources
 - » Soils
 - » Vegetation
 - » Water resources
 - » National Natural Landmarks

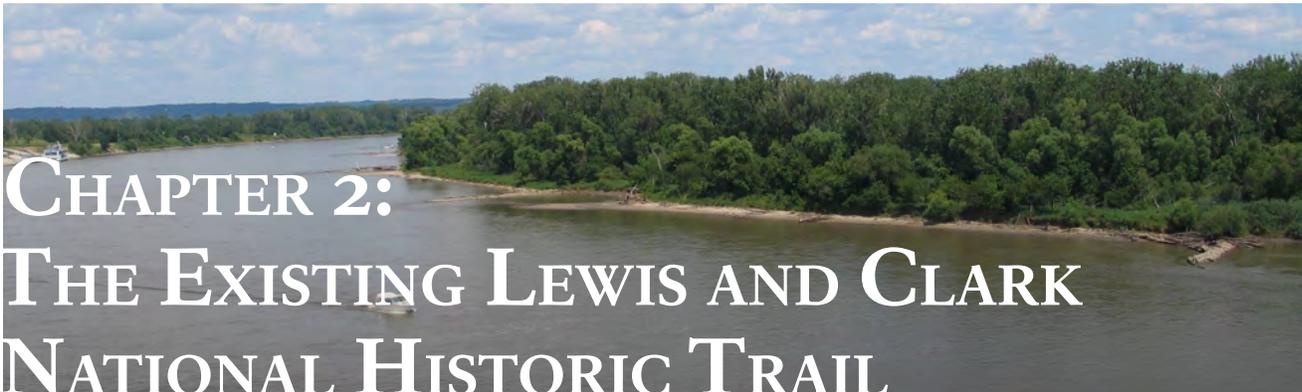
- Socioeconomics
 - » Land ownership and land values
 - » Tourism and the regional economy
 - » Visitor use and experience

Impact Topics Considered but Dismissed from Further Analysis

The following topics were considered but will not be analyzed in detail in this study. The rationale for dismissing each topic is discussed in Chapter 6: Affected Environment.

- Cultural Resources
 - » Museum collections
- Natural Resources
 - » Wetlands and floodplains
 - » Threatened or endangered species
 - » Prime and/or unique farmland
- Other Resources
 - » Environmental justice
 - » Indian trust resources

Intentionally left blank



CHAPTER 2: THE EXISTING LEWIS AND CLARK NATIONAL HISTORIC TRAIL

Trail Description

The current Lewis and Clark National Historic Trail is approximately 3,700 miles long, extending from Wood River, Illinois to the mouth of the Columbia River near present day Astoria, Oregon, following the historic routes of the Expedition.

The trail connects 11 states (Illinois, Missouri, Kansas, Nebraska, Iowa, South Dakota, North Dakota, Montana, Idaho, Washington, and Oregon) and many tribal lands. The trail was established by Congress in 1978 as part of the National Trails System (system) as one of four original national historic trails. Today, visitors can follow the approximate route of the Corps of Discovery by exploring the trail using a variety of transportation methods and interpretive means. See the existing Lewis and Clark National Historic Trail map below (figure 1).

Section 2(a) (16 USC 1241) of the NTSA indicates that the purpose of national trails is “to provide for the ever-increasing outdoor recreation needs of an expanding population” and “to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation.”

General guidance for trail planning and administration derives from the purpose of the trail as established by Congress; the national significance of the trail; and its fundamental resources and values; the primary interpretive themes that convey the trail’s significance; and federal, state, and county

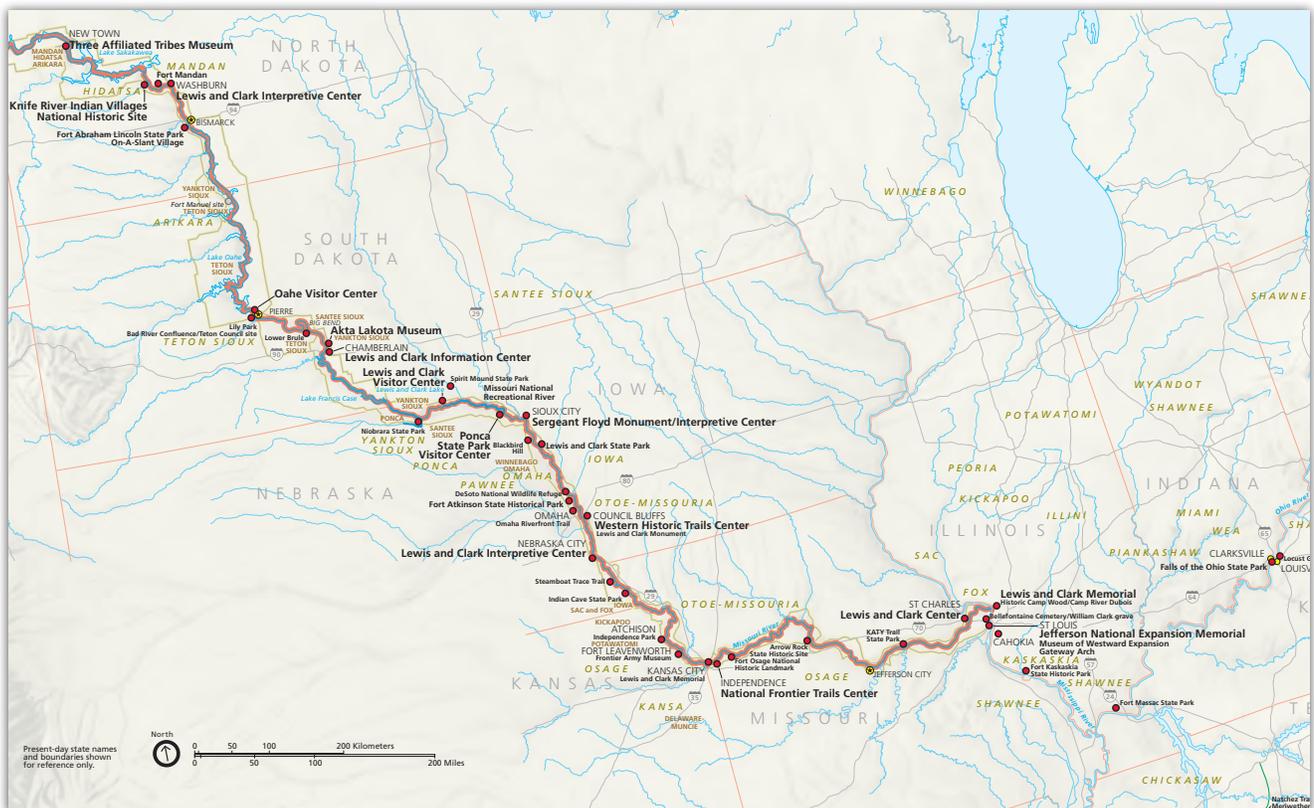
legal and policy requirements the more general body of laws and policies that apply to the Lewis and Clark National Historic Trail.

In 1982, a Comprehensive Plan for Management and Use was developed for the Lewis and Clark National Historic Trail. Key planning objectives were established, including management strategies, a trail marker plan, implementation priorities, and segment and site certification procedures. Significant visitor and recreation resources, as well as trail segments, were identified as part of the trail development plan and an extensive map detailed each trail segment. At the time the plan was implemented, it represented the best management decisions and practices for the protection, use, and enjoyment of visitor and recreation resources along the trail. While many of the elements of the plan have been completed, the plan is still in effect.

From 2003 to 2006, the nation commemorated the bicentennial of the Corps of Discovery and the Expedition. The bicentennial created renewed public interest and engagement with the legacy of the trail, including sites in the east, which are not part of the designated trail.

The Lewis and Clark National Historic Trail continues to provide the public with a tangible experience of the Corps of Discovery and the Expedition. The NPS manages the trail for the enjoyment of future generations. More information about the trail can be found at www.nps.gov/lecl.

Figure 1: Existing Trail



Purpose and Significance of the Lewis and Clark National Historic Trail

The purpose statement identifies the specific reason for the creation of the trail. Purpose statements are crafted through careful analysis of enabling legislation as well as legislative history that molded the development of the trail. The purpose statement reinforces the foundation for future trail management, administration, and use decisions.

The purpose of the Lewis and Clark National Historic Trail is to commemorate the 1804 to 1806 Lewis and Clark Expedition through the identification; interpretation; public use and enjoyment; and preservation of historic, cultural, and natural resources associated with the Expedition and its place in United States and tribal history.

Significance statements express why the trail's resources and values are important enough to warrant national trail designation. Statements of significance describe why the trail is important within a global, national, regional, and systemwide context. These statements are directly linked to the purpose of the trail and are substantiated by data, research, and consensus. Significance statements describe the trail's distinctive nature and help inform management decisions, focusing their efforts on preserving its resources and values.

The Lewis and Clark National Historic Trail is significant as a unit of the system because:

- The Lewis and Clark National Historic Trail commemorates the 1804 to 1806 journey of the Corps of Discovery, which explored the Louisiana Territory and beyond. This epic journey contributed to significant scientific knowledge and profound political, social, economic, cultural, and environmental changes to the lands and the peoples of North America.
- The Lewis and Clark National Historic Trail identifies and marks the historic route and sites where the Lewis and Clark journey took place and provides context for preservation of the route and further understanding of the Expedition and its subsequent outcomes.
- The Lewis and Clark National Historic Trail links contemporary communities including tribes, whose historic connections span generations, to the places associated with the 1804 to 1806 Expedition. The trail provides an opportunity to demonstrate the continuum of human history in these same locations and the subsequent relationships that developed among multiple cultures.
- Segments of the Lewis and Clark National Historic Trail retain characteristics and a sense of place similar to those seen and experienced by the Corps of Discovery. Today, the trail provides visitors with connections to the historic event through recreational, interpretive, and educational opportunities.
- The Corps of Discovery recorded a vast amount of information about landscapes, resources, and the people encountered during the journey. The observations of the Corps of Discovery are used today to connect the public with the past and illuminate the changes that have taken place over time.
- Following the Expedition's route from eastern forests through treeless plains, across the Rocky Mountains to the Pacific Northwest, the Lewis and Clark National Historic Trail crosses a wide diversity of landscapes, biological communities, and climate zones.

Primary Interpretive Themes

The primary interpretive themes, which are based on the trail's purpose and significance, provide the foundation for interpretive programs along the trail. The themes do not include everything that may be interpreted, but they do address the ideas critical to a visitor's understanding and appreciation of the trail's significance. Effective interpretation is achieved when visitors are able to associate resources and their values and consequently derive something meaningful from their experiences.

The interpretive themes discussed below were developed for the Lewis and Clark National Historic Trail.

Theme 1: Growth of a Young Nation

Leaving Wood River, the Corps of Discovery set out on a military expedition into unfamiliar lands to find a direct water route to the Pacific Ocean for commerce for the young nation. During the epic journey, the Corps discovered the rich potential for fur trading in the Upper Missouri area, identified and suggested locations for military posts, and gathered geographic and scientific data.

When the US government purchased the Louisiana Territory from the French government in 1803, it contained vast expanses of uncharted land. The theme, "Growth of a Young Nation," explores the primary mission of the Corps of Discovery—finding a direct water route through these lands to the Pacific Ocean. The Lewis and Clark National Historic Trail provides a vital link to our understanding of the growth and expansion of the nation.

Theme 2: Documenting Observations of Natural Science

The Corps of Discovery made meticulous notes of natural environs, documenting the diversity and uniqueness of plants and animals, weather, natural cycles, and the vitality of the natural world. Through diligent documentation, comparisons of their scientific observations to current conditions can capture visions of the past.

Although the Corps of Discovery was a military expedition, scientific discovery and recordation of the natural environments the Corps encountered were critical pieces of their mission and embody the theme, "Documenting Observations of Natural Science." The Corps of Discovery documented and recorded numerous plant and animal species new to science. Today, the Corps' observations are a critical resource for understanding the Lewis and Clark National Historic Trail.

Theme 3: Encountering Indigenous Peoples

The Corps of Discovery, diverse in their cultures, experiences, and skills, explored vast lands and participated in diplomatic encounters with American Indian nations. The Corps traded with, learned from, and depended on friendly relations with more than 50 tribes throughout the course of the journey. The American Indians they encountered had been living on the land for thousands of years and had complex societal, political, economic, and spiritual structures in place. The tribes shared their food, knowledge, and skills with the Corps of Discovery, thus ensuring the Corps' survival and the successful completion of their mission.

The Corps of Discovery was charged with making contact with American Indian tribes during their journey and establishing trade relationships with these groups. Without the help and support of numerous tribal groups, the Corps of Discovery would not have survived in the rugged North American interior.

The theme, “Encountering Indigenous Peoples,” tells the story of first encounters between a growing nation and the indigenous inhabitants who had lived on the land for thousands of years.

Theme 4: Unity through History

The Expedition marks a significant time in the nation’s history. Some call it an epic event leading to the prosperous growth of a young nation, while others characterize it as having huge disruptive impacts on the viable and rich indigenous cultures. Listening to each other with respect, the nation can unite through an understanding of multiple perspectives of the collective history of the United States.

The historic events of the Expedition weave together numerous perspectives and interpretations of first encounters between the growing nation and the tribal nations inhabiting the land. Commemorating and sharing the stories of the Corps of Discovery through the creation of the Lewis and Clark National Historic Trail provides an opportunity to explore and share these perspectives, providing a better understanding of the past. Through the theme, “Unity through History,” the Lewis and Clark National Historic Trail provides an opportunity to listen to and respect the multiple perspectives that mold the collective history of the United States.

Theme 5: Traces of the Past Observed Today

The Lewis and Clark National Historic Trail provides opportunities to glimpse the past, learn from history, visit tribal nations, and explore the landscape.

The Lewis and Clark National Historic Trail is a tangible link to the nation’s past and enables exploration of the cultural landscape with a newfound respect and appreciation for the legacy of the Expedition. The trail also provides an opportunity to visit contemporary American Indian tribal nations, understand their traditions, and gain respect for their relationship with these lands. The theme, “Traces of the Past Observed Today,” uses the historic resources of the trail to increase understanding and appreciation of the past.

Special Mandates

Special mandates are legal requirements and administrative commitments that apply to a specific trail. These special mandates may be legislative requirements or signed agreements that add another dimension to a trail unit's purpose and significance. They may commit managers to specific actions (such as a mandate to allow hunting) or limit their ability to modify land use in the trail unit (such as when an easement is in place). The NTSA provides the following text to describe how historic trails such as the Lewis and Clark National Historic Trail are to be managed:

(a) The national system of trails shall be composed of the following:

(3) National historic trails, established as provided in section 5 of this act, which will be extended to trails that follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Designation of such trails or routes shall be continuous, but the established or developed trail, and the

acquisition thereof, need not be continuous on-site. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment. Only those selected land- and water-based components of a historic trail that are on federally owned lands and meet the NHT criteria established in this act are included as federal protection components of a national historic trail. The appropriate secretary may certify other lands as protected segments of an historic trail upon application from state or local governmental agencies or private interests involved if such segments meet the NHT criteria established in this act, and such criteria supplementary thereto, as the appropriate secretary may prescribe, and are administered by such agencies or interests without expense to the United States.

The National Trails System Act; 16 USC 1241-1251 (PL 90-543, as amended through PL 111-11, March 30, 2009), section 3 [16 USC 1242]

Fundamental Resources and Values

Fundamental resources and values are the most important systems, processes, features, visitor experiences, stories, scenes, sounds, scents, or other resources and values to be communicated to the public about the trail. Fundamental resources and values warrant primary consideration during planning and management because they contribute to significance and are critical to achieving the trail purpose. Any loss of these fundamental resources and values could have a negative impact on the trail and severely jeopardize its ability to achieve its purpose or maintain its significance.

Fundamental resources and values identified with the Lewis and Clark National Historic Trail include:

- Historic route and associated natural history
- American Indian tribes and tribal cultural resources

Historic Route and Associated Natural History

Components of this fundamental resource and value include:

- Routes of the Corps of Discovery along historic waterways and adjacent terrain
- Corresponding locations along contemporary waterways
- Overland routes crossing the Rocky Mountains on the westward journey
- Multiple overland and water routes of the Corps of Discovery on the return journey
- Physical and biotic components of the lands through which the routes pass that define the various ecosystems encountered
- Experience of the historic routes through opportunities to interact with scenery, sounds, smells, weather, lands, plants, and animals similar to those experienced by the Expedition

- Public access to the historic trail and surrounding landscapes

American Indian Tribes and Tribal Cultural Resources

Components of this fundamental resource and value include:

- Tribal homelands
- Tribal and nontribal organizations
- Individuals
- Tribal agencies
- Tribal enterprises
- Tribal educational institutions

Critical Supporting Resources

Partnerships

Trail partners are stewards who are essential to the preservation, education, public access to, and protection of the Lewis and Clark National Historic Trail. The partners are individuals, organizations, agencies, and tribes that manage resources and connect visitors to trail history and experiences through a variety of opportunities.

For the National Park Service to manage and achieve its legislative mandate, national historic trail partners and partner organizations are critical. The length and complexity of the trail and the fact that very little of the trail is under NPS ownership means that many activities must be undertaken in collaboration with partners, landowners, and governmental organizations.

Primary Documentation

The explorers' documentation of their journey resulted in excellent museum collections related to the Expedition. Documentation of the Expedition includes journals, maps, oral histories, plant and animal specimens, artifacts, drawings, diagrams, and letters and correspondence. These items describe the careful planning and execution of the Expedition and document in detail the rivers, plants, animals, geology, geography, scenery, sounds, smells, climate, weather, and indigenous peoples of the lands encompassed by the Louisiana Purchase. Most of the documented collections are owned by private organizations and individuals, not the National Park Service.

The Expedition documentation conveys poignant human stories of survival and perseverance and chronicles how the human diversity of the Corps of Discovery and its diplomatic relationships with American Indian nations contributed to the safe return of the Corps of Discovery. The Expedition documentation also serves as a resource for

present day researchers and provides a look into US military, economic, political, and social agendas as a young nation asserting its authority and exploring its limits. Therefore, the National Park Service has a vested interest in preserving this material for future generations.

Trail Administration

The Lewis and Clark National Historic Trail currently employs 19 staff members. There is an administrative function (superintendent and business manager); a division of resources stewardship; a division of interpretation, with a subdivision that manages the Omaha Visitor Center; and an American Indian liaison. The trail staff manages a visitor center at the trail headquarters building in Omaha, Nebraska. In addition to the visitor center, the trail operates in cooperation with the Western National Parks Association bookstore (Riverfront Books) that provides a large variety of educational materials to the public. The trail also serves as the Midwest Region's public distribution center for all NPS brochures, as well as hundreds of brochures from Lewis and Clark-related sites along the trail.

Trail staff also work with the 150 other visitor centers along the trail, which are staffed by other agencies, organizations, and volunteer groups.

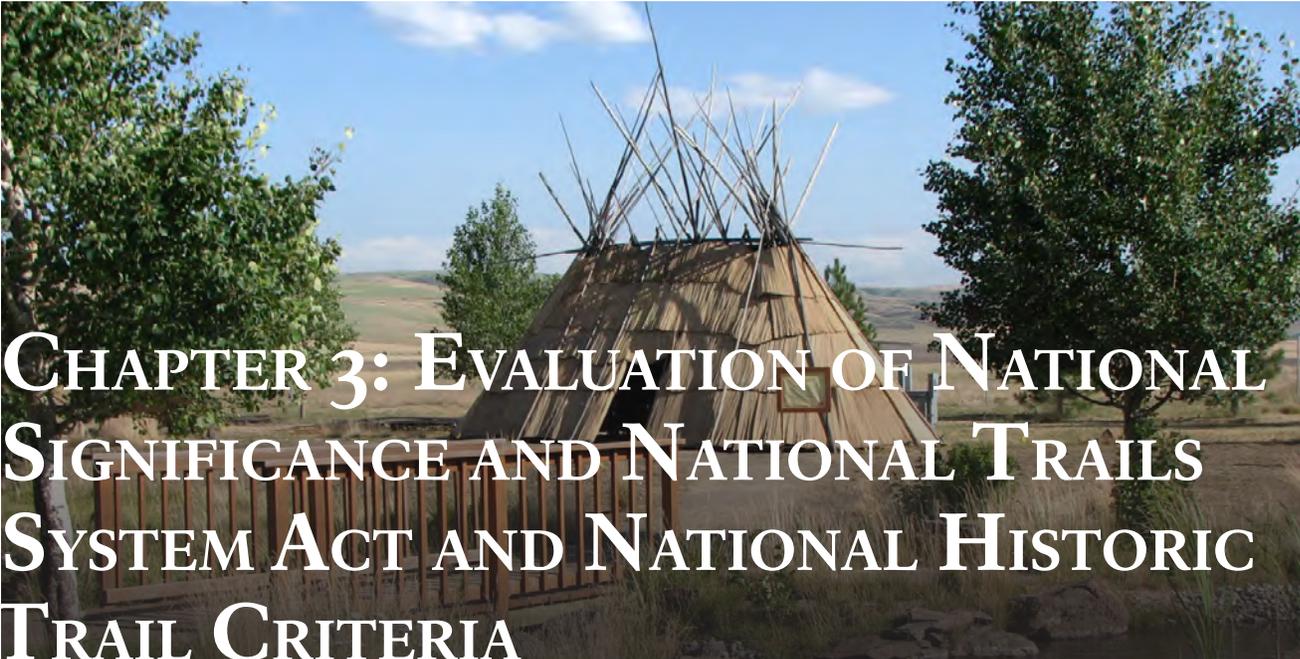
Lewis and Clark National Historic Trail at a Glance

- The NPS assists in marking the trail with auto tour route signs and other highway signs. There is currently a backlog need of more than \$1 million to repair and replace signs along the trail.
- The NPS publishes an Interactive Trail Atlas using Geographic Information System (GIS) software.
- The trail has an active social media program that includes Twitter, Facebook, YouTube, and a quarterly news magazine.

- The trail is approximately 3,700 miles long.
- There are 6,157.8 miles of the auto tour route.

The trail intersects:

- 95 state park and historic sites
- 29 national historic landmarks
- 4 national natural landmarks
- 56 US Army Corps of Engineers areas
- 21 US Fish and Wildlife Service refuges
- 15 US Forest Service national forests
- 34 US Forest Service ranger districts
- 11 US Bureau of Reclamation areas
- 15 major US Bureau of Land Management recreation areas, and many smaller areas
- 8 national park system units
- 9 national long distance trails cross or share the trail route with the Lewis and Clark National Historic Trail
- 24 American Indian reservations (50 tribes have historic ties to the trail)
- 11 states
- 26 Congressional districts



CHAPTER 3: EVALUATION OF NATIONAL SIGNIFICANCE AND NATIONAL TRAILS SYSTEM ACT AND NATIONAL HISTORIC TRAIL CRITERIA

Introduction

Suitability, feasibility, and national significance are the fundamental bases for determining eligibility for any potential addition to the National Trails System or the national park system. These three aspects establish the foundation for the required elements and specific eligibility criteria outlined in section 5(b) of the NTSA. This chapter addresses the national significance of the proposed trail extension; the following chapter addresses suitability and feasibility.

National Historic Significance is a required determination for a proposed national historic trail or trail extension to qualify for designation. The NTSA was amended in 1978 to include additional study criteria for national historic trails such as the Lewis and Clark National Historic Trail.

Section 5(b)(11) of the NTSA states that “To qualify for designation as a national historic trail, a trail must meet all three of the following criteria:

A It must be a trail or route established by historic use and must be historically significant as a result of that use. The route

need not currently exist as a discernible trail to qualify, but its location must be sufficiently known to permit evaluation of public recreation and historical interest potential. A designated trail should generally accurately follow the historic route, but may deviate somewhat on occasion of necessity to avoid difficult routing through subsequent development, or to provide some route variations offering a more pleasurable recreational experience. Such deviations shall be so noted on site. Trail segments no longer possible to travel by trail due to subsequent development as motorized transportation routes may be designated and marked on-site as segments that link to the historic trail.

B It must be of national significance with respect to any of several broad facets of American history, such as trade and commerce, exploration, migration and settlement, or military campaigns. To qualify as nationally significant, historic use of the trail must have had a far-reaching effect on broad patterns of American culture. Trails significant in the history of Native Americans may be included.

- C** It must have significant potential for public recreational use or historical interest based on historic interpretation and appreciation. The potential for such use is generally greater along roadless segments developed as historic trails and at historic sites associated with the trail. The presence of recreation potential not related to historic appreciation is not sufficient justification for designation under this category.”

Element 5(b)(3) was also updated in 1978 to require proposed national historic trails and trail extensions to meet national historic significance as defined for the National Historic Landmarks (NHL) program.

Required Element Three: *The characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior’s National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 USC 461).*

The evaluation of required element three is included with the evaluation of criterion 11B because they are so closely related.

Study Methodology

Each trail segment traveled by the Corps of Discovery in the east was researched and mapped. This process used historic documentation and fieldwork to determine as closely as possible the actual location of each trail corridor. Once the trails were defined, they were divided into logical segments and each segment was first evaluated against NTSA criteria, section 11A. The historic use of each trail segment was evaluated to determine if it was established by historic use, and if it was nationally significant as a result of that use, as related to the Expedition.

Routes that met the criteria for national significance were then evaluated against the NHL criteria, and their location in the NPS Thematic Framework (appendix D) was confirmed. Routes that meet all of the preceding criteria were then evaluated against the remaining feasibility and suitability elements (in Chapter 4: Evaluation of Feasibility and Suitability). Routes that did not meet NTSA or NHL criteria were not evaluated against the remaining feasibility and suitability requirements.

Period of Significance and Timeline

The established Lewis and Clark National Historic Trail has a period of significance from May 14, 1804 to September 23, 1806, starting at Wood River, Illinois, and ending with the Corps of Discovery’s return to St. Louis.

The period of significance for this trail extension study is January 1803 to January 1807.

In January 1803, President Thomas Jefferson first requested funding for an expedition to explore the Missouri River and the West. Congress granted his request in February and funded the Expedition. Meriwether Lewis began his preparations for the Expedition shortly afterward.

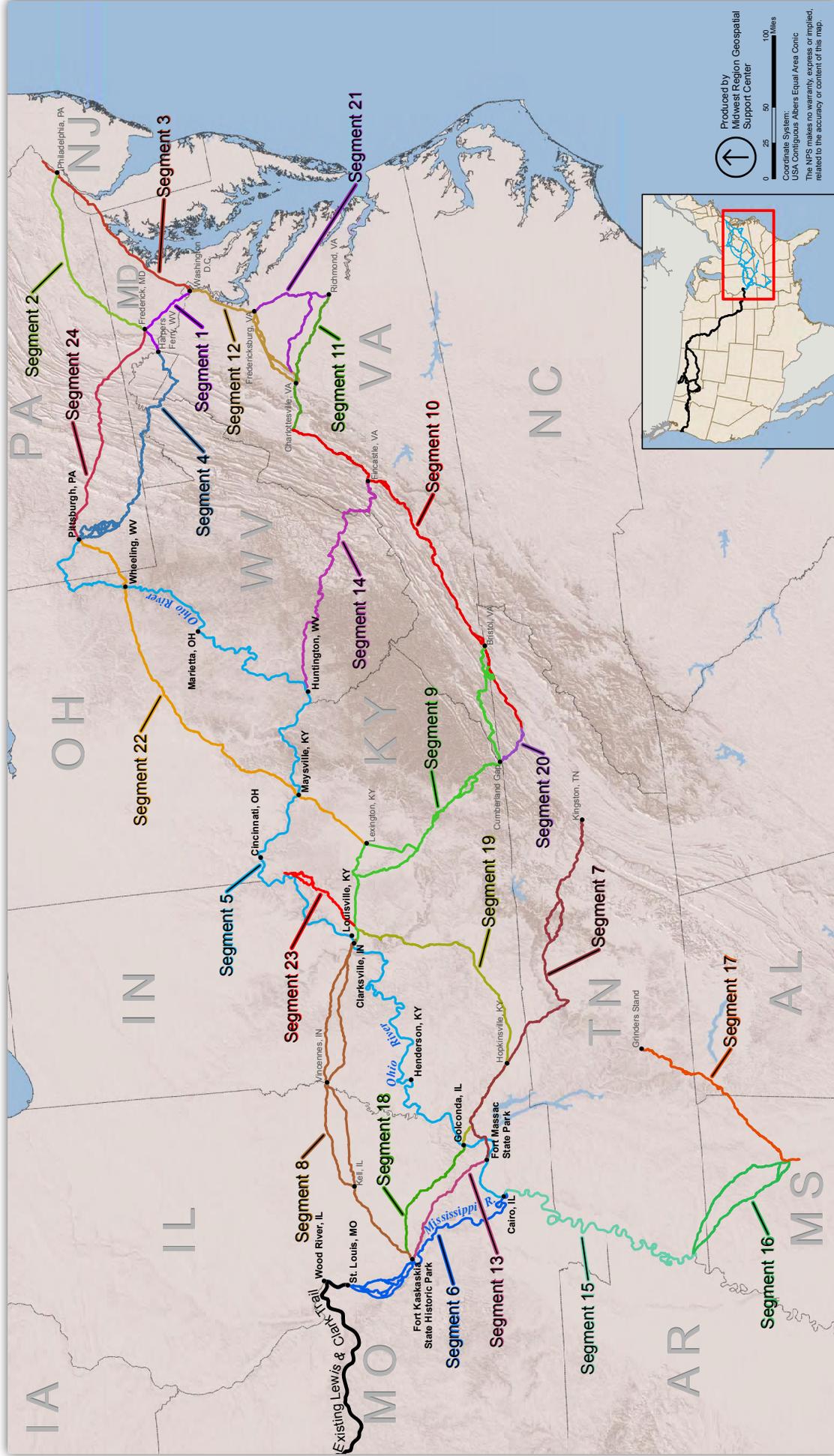
By January 1807, the Expedition had concluded, the members of the Corps of Discovery had disbanded, and the two captains celebrated with the President in Washington, DC. While the struggle to publish the explorers' journals continued, the great journey was complete. See table 1 below for additional information on the timeline.

(This study also reviewed many routes used by Lewis and Clark individually from 1807 to 1814. The information on these routes is included for informational purposes only, as they were found to be outside the main period of significance, and are not suitable for addition to the existing national historic trail.)

Table 1: Lewis and Clark Eastern Legacy Timeline

Date	Event
January 1803	President Jefferson requested funding for the Expedition; funding was approved by Congress in February
February 1803	President Jefferson requested assistance from the American Philosophical Society to train Lewis for the Expedition
March 1803	Lewis traveled to Harpers Ferry and ordered supplies
April–June 1803	Lewis traveled to Philadelphia via overland routes and was instructed by members of the American Philosophical Society
June 1803	Lewis returned to Washington, DC and received his final instructions at the White House
July 3, 1803	President Jefferson and Lewis received confirmation of the Louisiana Purchase in Washington, DC
July 5, 1803	Lewis left Washington, DC for Pittsburgh via overland routes
August 31, 1803	Lewis left Pittsburgh for Clarksville, Indiana, near the Falls of the Ohio, via the Ohio River
October 15, 1803	Lewis joined Clark at Clarksville, Indiana, near the Falls of the Ohio
October 26, 1803	The party left Clarksville, Indiana, near the Falls of the Ohio, via the Ohio and Mississippi Rivers, by way of Fort Massac, Cape Girardeau, Kaskaskia, and Cahokia
December 12, 1803	The party reached Wood River and established their winter camp
March 1804	The Louisiana Territory was officially transferred to the United States in a ceremony at St. Louis
May 14, 1804	The party left St. Louis for the Pacific Ocean
May 1804–September 1806	The journey of the Corps of Discovery to the Pacific Ocean and back, currently designated as a national historic trail
September 23, 1806	The party returned to St. Louis
October 1806	The party disbanded at St. Louis
November 1806	Lewis and Clark traveled with the Mandan Indian and Osage Delegations, first by ship from St. Louis, and then overland from Kaskaskia to Louisville
November 1806–January 1807	The party separated; Lewis, Clark, and the Mandan Tribal Delegation made their way separately to Washington, DC
January 18, 1807	Lewis, Clark, and President Jefferson celebrated in Washington, DC

Figure 2: Trail Study Segments



Evaluation of National Historic Trail Criterion 11A

A proposed National Historic Trail (NHT) must be a trail or route established by historic use and must be historically significant as a result of that use. The route need not currently exist as a discernible trail to qualify, but its location must be sufficiently known to permit evaluation of public recreation and historical interest potential. A designated trail should generally accurately follow the historic route, but may deviate somewhat on occasion of necessity to avoid difficult routing through subsequent development, or to provide some route variations offering a more pleasurable recreational experience.

Three elements of criterion 11A are discussed in the following sections:

- 1** Were the study trails and routes established by historic use?

The intent of this part of the criterion is to ensure the route being considered is a definable trail used in the historic period and not an arbitrarily created route. In the case of this trail extension study, the question is further refined to determine if the routes used by the Corps of Discovery were used in a way different than they had been used in the past, which established a historic route. Routes established outside the period of significance, or by travelers other than the Corps of Discovery, do not qualify the route to meet this criterion.

The NPS finds that all of the routes traveled by Lewis, Clark, and the Corps of Discovery in the east had primarily been established by previous use. These routes had been established first by migrating animals, and later by American Indians and European settlers who adopted them as routes for foot and water travel. The Corps of Discovery mostly traveled these known routes in the same way they had been traveled many times before. Only three route segments have been determined to be established by the Corps of Discovery. These findings are documented in the segment-by-segment analysis in appendix A.

- 2** Are the trails and routes significant as a result of that historic use or uses?

The activities that took place during the use of the trails were evaluated to determine their level of significance. In the case of this trail extension study, the task is to determine if the route is significant as a result of its use by the Corps of Discovery. Previous use and potential significance outside the period of significance, as defined by the study, does not qualify the route to meet this criterion.

The NPS finds that most of the routes traveled by Lewis, Clark, and the Corps of Discovery in the east are not significant for their association with Lewis, Clark, and the Corps of Discovery. These routes were the thoroughfares of early America, and play a large role in the history of the United States. Only three route segments have been determined to be significant for their use by the Corps of Discovery. These findings are documented in the segment-by-segment analysis in appendix A.

- 3** Are the locations of the Eastern Legacy routes sufficiently known?

The determination of the location of the trail under the NTSA is related to the concept of “integrity of location” under the National Register of Historic Places (National Register) and NHL evaluation processes. Location is one of seven aspects of integrity. “Location is the place where the ... historic event[s] occurred ... The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons” (NPS 1998:44).

For the purpose of this study, nearly all segments meet the location criterion. NPS staff researched the Eastern Legacy routes and mapped the routes in a GIS application. The actual locations of campsites and stopping places are not definitively known, but NPS has a high degree of certainty for the location of the routes traveled. The few exceptions to this finding are noted in the segment-by-segment analysis in appendix A.

Summary Findings for Criterion 11A

The routes traveled by the Corps of Discovery in the east had been travel corridors for thousands of years, first for the Pleistocene megafauna that roamed the continent in the last ice age, and later adopted by American Indian tribes who called the area home centuries before the arrival of Europeans. Unlike the already-designated western routes, by 1803 the eastern corridors had been altered by several hundred years of European and colonial European American influence and settlement. Improved roads, towns, farms, and industry were all present to varying degrees as the frontier expanded westward from the 16th to 19th centuries.

The NPS evaluated 25 distinct route segments used by the Corps of Discovery during the preparation and return phases of the Expedition (figures 2 and 3).

Conclusion

The NPS finds that three of these route segments clearly meet the criteria for significance established by the NHT criteria in section 5(b)(11) of the NTSA. Route segments 5a, 5b, and 6, the river routes the Corps of Discovery took from Pittsburgh, Pennsylvania to their winter quarters in Wood River, Illinois in 1803, are further described below.

- **Segment 5a**, the Ohio River from Pittsburgh, Pennsylvania to Louisville, Kentucky, near the Falls of the Ohio. While in Pittsburgh, Lewis purchased the keelboat used on the Expedition and assembled his first group of recruits to man the boat. He then set off from Pittsburgh down the Ohio River to begin the water journey that was to continue for thousands of miles in search of the all-water route to the Pacific Ocean. Previous travels to prepare for the Expedition occurred on land. This was also where Lewis received the letter from William Clark, stating that he (Clark) had committed

to joining Lewis on the Expedition. After leaving Pittsburgh on the keelboat, pirogue, and canoe laden with weapons and supplies, Lewis and the men initiated their hands-on activities that were necessary to prepare them for the hardships of the long trip west. Lewis tested his new guns and experienced the difficulties and delays navigating the river, including dealing with unexpected “riffles” or sandbars that blocked the boats. It was also during this time Lewis began taking notes on American Indian sites and began collecting specimens for the President.

The actions of the early members of the Corps of Discovery along this route assured that their technology and techniques would work correctly to support exploration and documentation. Lewis gained a better understanding of the number of men needed for the Expedition, how to operate the new vessels, how to navigate the sandbars prevalent in the Ohio River and the Mississippi River; and refined his techniques to map, document, and investigate the surroundings.

- **Segment 5b**, Louisville, Kentucky, near the Falls of the Ohio, to the confluence of the Ohio and Mississippi Rivers (near present day Cairo, Illinois): Louisville is where Lewis and Clark met for the first time since their previous collaboration during US military campaigns, and joined their preliminary crews. Prior to this point, they had worked individually, but it was here that the full Corps of Discovery was formed and began to work together. Lewis and Clark stayed in Louisville and Clarksville for several days to solidify their plans and their crew. Once back on the water, they mapped the river’s course and met American Indian tribes of the southern Illinois Territory and surrounding areas. Their activities along this stretch of river were remarkably similar to their activities along the rivers of the Louisiana Territory.

- **Segment 6**, the Mississippi River from its confluence with the Ohio River (near present day Cairo, Illinois) to Wood River, Illinois: At the confluence of the rivers, the Corps of Discovery turned upstream for the first time and began working against the current. This would be their orientation for the next several thousand miles. The crew gained familiarity with the keelboat and pirogues in this different orientation and solved new navigational challenges. Along this segment, the explorers acted as diplomats, conversing with foreign powers who maintained rights over the land they approached. Again, their activities along this stretch of river were remarkably similar to their activities in the West.

The Corps of Discovery's activities along segments 5a, 5b, and 6 establish these segments as historically and nationally significant, and meet the criteria of the NTSA (figure 4).

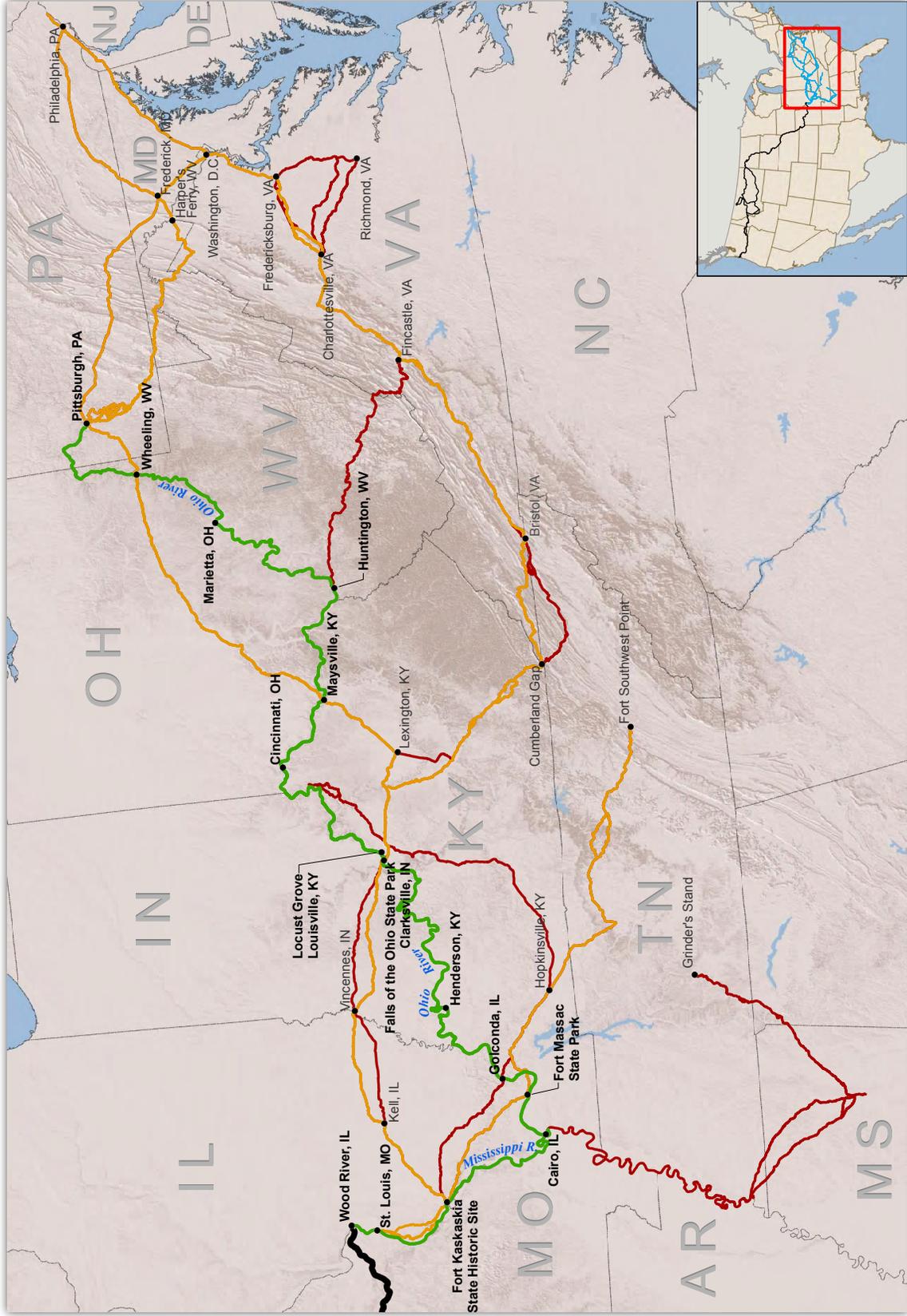
The NPS finds that the remaining 22 preparation and return routes studied do not have the same level of significance as the routes of the established national historic trail and do not meet the criteria for national significance established by the NTSA.

- On four of these routes (segments 1, 2, 3, and 4, the preparation phases between Washington, DC and Pittsburgh, Pennsylvania), Lewis prepared himself for the journey to come. He acquired materials and skills, purchased equipment, and recruited men for the Expedition. But he did these things while on established and well-known travel routes. The most significant activities of this time took place at important homes and institutions, not along the routes traveled. This preparation phase was not exploration, as routes were chosen based on experience and expedience. The NPS finds that the activities on these routes are not nationally significant as defined by the NTSA and are found to be not eligible for designation or addition to the existing national historic trail.

- Three of the routes were not traveled by Lewis or Clark. One was the recruiting route taken by George Drouillard when he traveled south from Fort Massac toward Fort Southwest Point in Tennessee, apart from the main body of the Expedition (segment 7). This route is speculative, as little documentation exists to confirm the route. Another route (segment 24) was the wagon trip in 1803. The wagon train hauled supplies for the coming Expedition from Frederick, Maryland, to meet Lewis in Pittsburgh, Pennsylvania, before his descent down the Ohio River. The third route (segment 22) was taken by two of the three American Indian tribal delegations east toward Washington, DC. These three routes do not meet the criteria for national significance as established in the NTSA, and are not eligible for designation or addition to the existing national historic trail.
- The remaining 15 routes studied (segments 8 through 21 and 23) were traveled after the Expedition returned to St. Louis in 1806. On these routes, Lewis and Clark traveled mostly separately, and the Corps of Discovery did not pass as a unit working together. They were returning to their lives post-Expedition and using the routes that took them back and forth from their families and their jobs. These individual actions and travels are important in the lives of Lewis and Clark, but they do not add to the significance of the national historic trail. The activities along these routes were not well documented, as the explorers stopped journaling in Wood River or before.
- These 22 routes do not meet the criteria for national significance as established in the NTSA; therefore, these routes are not eligible for designation or addition to the existing national historic trail.

Many of these 22 study routes have deep local significance and may be nationally significant for reasons other than their association with Lewis and Clark (such as for their roles in American Indian history, European American and American Indian migration, military expeditions, and trade in the development of the United States). Even though the explorers' use of some of these routes may be among the earliest documented travels, the importance of these routes is derived from uses outside the key period of significance of Lewis and Clark's journeys (1803–1807), which makes them ineligible to be added to the Lewis and Clark National Historic Trail.

Figure 3: Findings for All Studied Routes



Nationally Significant Routes
(within Period of Significance)

- Lewis: Aug. 31 - Oct. 14, 1803; Pittsburgh, PA to Louisville, KY
- Lewis & Clark: Oct. 26 - Nov. 14, 1803; Louisville, KY to Cairo, IL
- Lewis & Clark: Nov. 14 - Dec. 12, 1803; Cairo, IL to Wood River, IL

Other Studied Routes
(within Period of Significance)

Other Studied Routes
(outside Period of Significance)

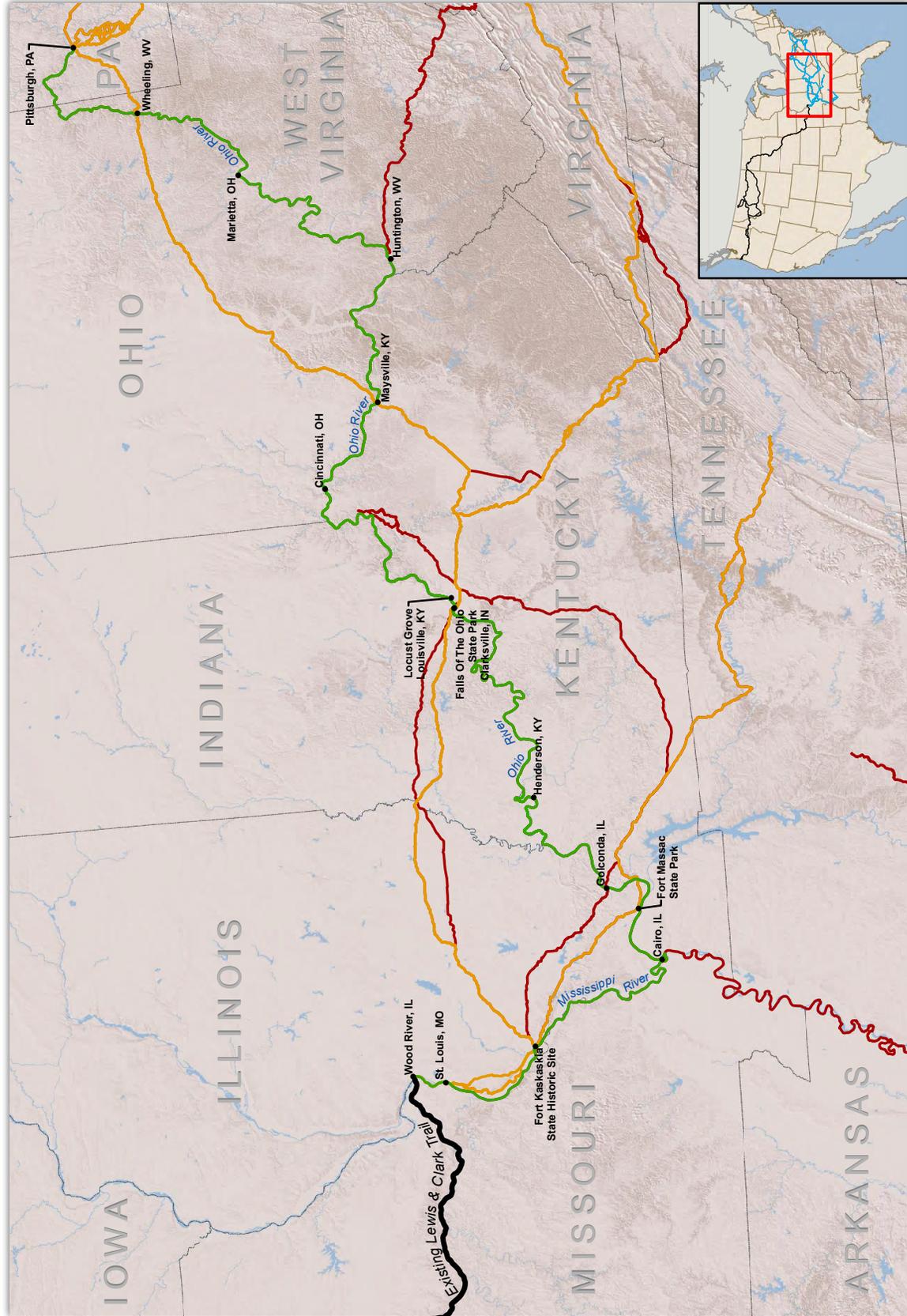
Existing Lewis & Clark National Historic Trail

Produced by
National Geographic
Support Center

Coordinate System:
USNAD 83
USNAD 83
The NPS makes no warranty, express or implied,
regarding the accuracy or content of this map.

0 25 50 100
Miles

Figure 4: Nationally Significant Study Routes



Nationally Significant Routes (within Period of Significance)

- Lewis: Aug. 31 - Oct. 14, 1803; Pittsburgh, PA to Louisville, KY
- Lewis & Clark: Oct. 26 - Nov. 14, 1803; Louisville, KY to Cairo, IL
- Lewis & Clark: Nov. 14 - Dec. 12, 1803; Cairo, IL to Wood River, IL

Other Studied Routes (within Period of Significance)

Other Studied Routes (outside Period of Significance)

Existing Lewis & Clark National Historic Trail

Produced by
 National Geographic
 Geographic Society
 Support Center

Coordinate System:
 USA Contiguous Albers Equal Area Conic
 The NPS makes no warranty, express or implied,
 related to the accuracy or content of this map.

0 25 50 100 Miles

Table 2 summarizes each study segment.

Table 2: Summary Table – Criterion 11A

Segment Number	Segment Location	Is the Segment Nationally Significant, as Defined by the NTSA?	Rationale for Positive Findings
Segment 1	Washington DC to Harpers Ferry, Virginia (contemporary West Virginia) via Fredericktown, Maryland (contemporary Frederick)	No (Lewis's activities do not qualify as nationally significant or establish the route)	
Segment 2	Fredericktown, Maryland (contemporary Frederick, Maryland) to Philadelphia, Pennsylvania (via York, Pennsylvania and Lancaster, Pennsylvania)	No (Lewis's activities do not qualify as nationally significant or establish the route)	
Segment 3	Philadelphia, Pennsylvania to Washington, DC (via Wilmington, Delaware and Baltimore, Maryland)	No (Lewis's activities do not qualify as nationally significant or establish the route)	
Segment 4	Harpers Ferry, Virginia (contemporary West Virginia) to Pittsburgh, Pennsylvania (via Winchester, Virginia, Cumberland, Maryland, and Brownsville, Pennsylvania)	No (Lewis's activities do not qualify as nationally significant or establish the route)	
Segment 5a	Ohio River; Pittsburgh, Pennsylvania to Clarksville, Indiana, near the Falls of the Ohio	YES	Lewis and recruits tested the keelboat and weapons and learned to navigate the river.
Segment 5b	Clarksville, Indiana, near the Falls of the Ohio to the Ohio and Mississippi Rivers Confluence, IL/Kentucky/Missouri	YES	Lewis and Clark joined forces and began working together. The Expedition began in earnest.
Segment 6	Mississippi River; Ohio and Mississippi Rivers Confluence, Illinois/Kentucky/Missouri to Wood and Mississippi Rivers Confluence, Illinois	YES	Expedition members began mapping the Mississippi River and sandbars and began discussions with American Indian tribes.
Segment 7	Fort Massac, Illinois to Fort Southwest Point, Tennessee	No (not traveled by Lewis, Clark, or main body of the Corps of Discovery)	

Segment Number	Segment Location	Is the Segment Nationally Significant, as Defined by the NTSA?	Rationale for Positive Findings
Segment 8	Kaskaskia, Illinois to Clarksville, Indiana, near the Falls of the Ohio (via Vincennes, Indiana)	No (Lewis and Clark's joint activities do not qualify as nationally significant or establish the route)	
Segment 9	Louisville, Kentucky to Sapling Grove, Tennessee/Virginia (contemporary Bristol, Tennessee/Virginia, via Frankfort, Mount Vernon, and Cumberland Gap, Kentucky)	No (Lewis and Clark's individual activities do not qualify as nationally significant or establish the route)	
Segment 10	Bean Station, Tennessee to Staunton, Virginia (via Abingdon, Wytheville, and Fincastle, Virginia)	No (Lewis and Clark's individual activities do not qualify as nationally significant or establish the route)	
Segment 11	Staunton, Virginia to Richmond, Virginia (via Ivy and Charlottesville, Virginia)	No (Lewis and Clark's individual activities do not qualify as nationally significant or establish the route)	
Segment 12	Charlottesville, Virginia to Washington, DC (via Orange, Fredericksburg, and Alexandria, Virginia)	No (Lewis and Clark's individual activities do not qualify as nationally significant or establish the route)	
Segment 13	Fort Massac, Illinois to Kaskaskia, Illinois	No (outside the period of significance)	
Segment 14	Fincastle, Virginia to Huntington, Virginia (contemporary West Virginia) via White Sulphur Springs, Rainelle, and Charleston, Virginia (contemporary West Virginia)	No (outside the period of significance)	
Segment 15	Mississippi River; Ohio and Mississippi Rivers Confluence, Illinois/Kentucky/Missouri to Fort Pickering, Chickasaw Bluffs (contemporary Memphis, Tennessee)	No (outside the period of significance)	
Segment 16	Fort Pickering, Chickasaw Bluffs to Chickasaw Agency (contemporary Memphis, Tennessee to Old Houlika, Mississippi)	No (outside the period of significance)	

Segment Number	Segment Location	Is the Segment Nationally Significant, as Defined by the NTSA?	Rationale for Positive Findings
Segment 17	Chickasaw Agency to Grinder's Stand, Tennessee (contemporary Old Houlka, Mississippi to historic stand location near contemporary Hohenwald, Tennessee)	No (outside the period of significance)	
Segment 18	Kaskaskia, Illinois to Lusk's Ferry on the Ohio River, Illinois (contemporary Golconda, Illinois)	No (outside the period of significance)	
Segment 19	Lusk's Ferry on the Ohio River, Kentucky to Louisville, Kentucky (via Hopkinsville, Russellville, Bowling Green, and Elizabethtown, Kentucky)	No (outside the period of significance)	
Segment 20	Cumberland Gap, Kentucky to Bean Station, Tennessee	No (outside the period of significance)	
Segment 21	Keswick/Cismont, Virginia to Fredericksburg, Virginia (via Louisa, Richmond, and Bowling Green, Virginia)	No (outside the period of significance)	
Segment 22	Lexington, Kentucky to Pittsburgh, Pennsylvania via Limestone, Kentucky (contemporary Maysville, Kentucky), Chillicothe, Ohio, Lancaster, Ohio, and Wheeling Town, Virginia (contemporary Wheeling, West Virginia)	No (not traveled by Lewis, Clark, or main body of the Corps of Discovery)	
Segment 23	Louisville, Kentucky to Cincinnati, Ohio (via Big Bone Lick, Kentucky)	No (outside the period of significance)	
Segment 24	Harpers Ferry, Virginia (contemporary West Virginia) to Pittsburg, Pennsylvania (wagon route via Fort Loudon, Bedford, Ligonier, and Greensburg, Pennsylvania)	No (outside the period of significance)	

Evaluation of Criterion 11B

A proposed NHT must be of national significance with respect to any of several broad facets of American history, such as trade and commerce, exploration, migration and settlement, or military campaigns. To qualify as nationally significant, historic use of the trail must have had a far-reaching effect on broad patterns of American culture. Trails significant in the history of American Indians may be included.

Criterion 11B describes the overall broad national significance of Lewis and Clark in general and the associated Eastern Legacy of these individuals, as well as the travel routes and sites, geopolitical context, and relevance of this event and period within American history.

This criterion sets out the conditions required for a route to become a national historic trail. The terms “of national significance,” “broad facets of American History,” and “far-reaching effect on broad patterns of American culture” provide the context and nature of a national historic trail and the high standard it must meet.

Only segments 5a, 5b, and 6 were evaluated against the NPS Thematic Framework (appendix D). The remaining 22 routes were not established by historic use by the Corps of Discovery, and will not be further evaluated. Many of the dismissed routes have deep local significance and may be nationally significant for reasons other than their association with Lewis and Clark (such as for their roles in migration, military expeditions, and trade in the development of the United States, and for their use by American Indians). For the most part, their importance is derived from uses outside the key period of Lewis and Clark’s journeys (1803–1807).

The existing Lewis and Clark National Historic Trail is significant for its far-reaching effect on the culture of the United States. The existing trail is particularly associated with the topics of trade and commerce, exploration, migration and settlement, military campaigns, and the

history of American Indians. Per the “Lewis and Clark Eastern Legacy Study” by John S. Salmon (2007), “Several historical themes can be associated with the eastern phase of the expedition...they include Political and Military Affairs, 1783–1860 (Jeffersonian Period, 1800–1811), and Westward Expansion of the British Colonies and the United States, 1763–1898 (British and United States Explorations of the West: Lewis and Clark Expedition, 1804–1806). These themes and others are outlined in *History and Prehistory in the National Park System and the National Historic Landmarks Program: The Thematic Framework* (1987).”

In terms of the 1994 NPS Thematic Framework, the existing trail and the eastern routes are most closely associated with the themes of: I) Peopling Places, III) Expressing Cultural Values, V) Developing the American Economy, VI) Expanding Science and Technology, and VIII) The Changing Role of the United States in the World Community (appendix D).

The evaluation below highlights the most relevant topics and themes for the proposed trail extension routes.

- **Exploration** (most closely related to NPS theme VI) Expanding Science and Technology)

The Expedition made major contributions to the fields of geography, cartography, and natural history. The two men took notes on and collected plants, animals, and fossils at multiple locations along the route, including the routes proposed for extension of the trail. The meticulously compiled journals of the two captains and other Corps of Discovery members provided abundant knowledge about the natural world of the continental United States.

Meriwether Lewis underwent extensive scientific training at the American Philosophical Society and learned pertinent skills in cartography and astronomical observation. The Corps of Discovery benefited from this training as they surveyed, created, and copied maps of the Ohio and

Mississippi Rivers and their confluence. This work began in the segments proposed for the trail extension and was continued on the existing trail.

- **Migration and Settlement** (most closely related to NPS theme I) Peopling Places)

The Ohio River and other routes followed in the east were major trade routes, part of a vast national transportation network. The Louisiana Purchase, the successful Expedition, and increasing population resulted in greater migration and settlement west of former US land boundaries.

- **History of American Indians** (most closely related to NPS theme III) Expressing Cultural Values and VIII) Changing Role of the United States in the World Community)

Lewis and Clark conducted ethnographic documentation of American Indian nations at numerous points before, during, and after the Expedition. Lewis inspected the Cahokia Mounds along the Mississippi River and Lewis's notes on Illiniwek American Indian Nations in Illinois include information on diet and customs.

The voyage of the Corps of Discovery was mirrored to some extent by three American Indian tribal delegations that traveled east to Washington, DC to meet the leaders of the new nation. The full story of the tribal delegations would be best examined in a separate study that focuses on the interactions between early colonists and American Indians; that study could more thoroughly examine the experience of American Indian tribes with the Corps of Discovery and its aftermath, including the establishment of diplomatic relations, advancing European American settlement, treaties, and eventual loss of native homelands.

- **Trade and Commerce** (most closely related to NPS theme V) Developing the American Economy)

The results of the Expedition spurred curiosity about potential settlement and resource opportunities in the West. One significant opportunity that resulted from the Expedition was the expansion of the fur trade, particularly in the Upper Missouri-Yellowstone River-Rocky Mountain area. The fur trade was so important that Lewis included the potential for fur trade in his first letter to President Jefferson, immediately upon his return to St. Louis in 1806. The wealth of information recorded and brought back by the Corps of Discovery about the climate, terrain, ecology, and more presented a passive invitation for colonists to migrate, settle, and use the resources available. Additionally, President Jefferson's motivations for a coast-to-coast nation began to be fully realized during the post-Expedition phase when Lewis and Clark brought back news of their discoveries. The two explorers became key participants in Indian Policy and diplomatic relations in the following years.

The Ohio River and other major routes followed in the east were established trade routes and part of national transportation networks. This network was extended with the Corps of Discovery's successful transition from going down-river on the Ohio River, to up-river on the Mississippi and Missouri Rivers. These routes became critical for trade and commerce between the eastern United States and the West, allowing and supporting major population shifts that occurred between 1803 and 1814, and for many years after.

Conclusion

The NPS finds that the Thematic Framework requirements are met for the proposed extension routes (segments 5a, 5b, and 6) (appendix D). These routes echo and extend the themes in place for the existing national historic trail. Criterion 11B is met for these three route segments.

Evaluation of Required Element Three (Historic Significance/ National Significance)

The characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 USC 461).

To attain national significance per required element three, proposed national historic trails (or extensions of existing trails) must qualify under at least one of six criteria that have been established to evaluate properties for national significance and possible designation as national historic landmarks. These six criteria were established as federal regulations were issued subsequent to and in accordance with national policy set forth in the Historic Sites Act of 1935.

A NPS bulletin that pertains to the National Register of Historic Places, "How to Apply the National Register Criteria for Evaluation," states "The quality of national significance [when considering potential National Historic Landmarks] is ascribed to districts, sites, buildings, structures, and objects that possess exceptional value or quality in illustrating or interpreting the heritage of the United States in history, architecture, archeology, engineering, and culture and that possess a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- 1 That are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained; or
- 2 That are associated importantly with the lives of persons nationally significant in the history of the United States; or
- 3 That represent some great idea or ideal of the American people; or
- 4 That embody the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style or method of construction, or that represent a significant, distinctive and exceptional entity whose components may lack individual distinction; or
- 5 That are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture; or
- 6 That have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts and ideas to a major degree."

Criteria 3, 4, 5, and 6 above are less applicable and not employed as frequently to evaluate the significance of national historic trails and historic road segments; criteria 1 and 2 are more appropriate to be used for this purpose.

A note on "integrity" as described in the paragraph above. Unlike national historic landmarks, there are no criteria for NHT segments to have integrity as defined above. Trails sometimes leave evidence of their passage, as in wagon ruts along the Oregon and

California Trails, but other trails are ephemeral on the landscape. In the case of national historic trails, “integrity of location” is interpreted to mean the NPS can accurately map the routes traveled by the explorers. In the case of the Expedition, very few extant resources serve as tangible markers of their passage.

This section pertains only to segments 5a, 5b, and 6. Other route segments failed to meet previous criteria and are not further evaluated.

- The NPS finds that the proposed trail extension routes meet the following NHL criteria:

Criterion 1: the Corps of Discovery is associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained.

Criterion 2: the routes are associated with the lives of Meriwether Lewis and William Clark, who are nationally significant in the history of the United States.

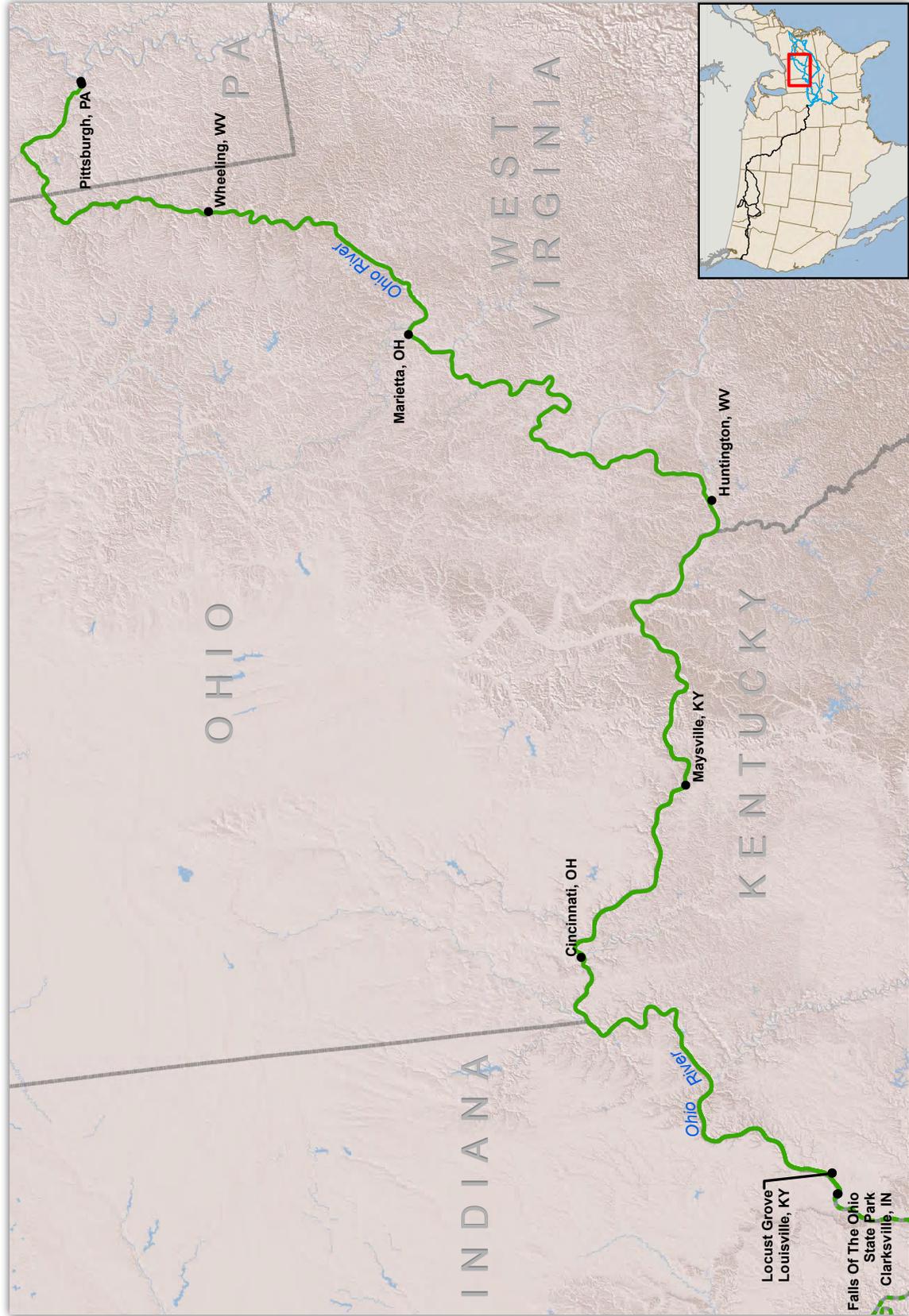
The NPS prepared a significance statement for the National Park System Advisory Board, as required by element three. This statement was peer reviewed by two experts on the history of the Expedition.

The significance statement was submitted to the National Park System Advisory Board’s National Historic Landmarks Committee, which at its November 16, 2015 meeting, unanimously concurred with the findings and forwarded the nomination to the full Advisory Board. The Advisory Board, in turn, approved the nomination at its June 2016 meeting.

Conclusion

The NPS finds that the NHL criteria are met for proposed extension route segments 5a, 5b, and 6. The National Park System Advisory Board concurs that route segments 5a, 5b, and 6 are nationally significant and are eligible for addition to the existing national historic trail.

Figure 5: Segment 5A - Pittsburgh, Pennsylvania to Louisville, Kentucky

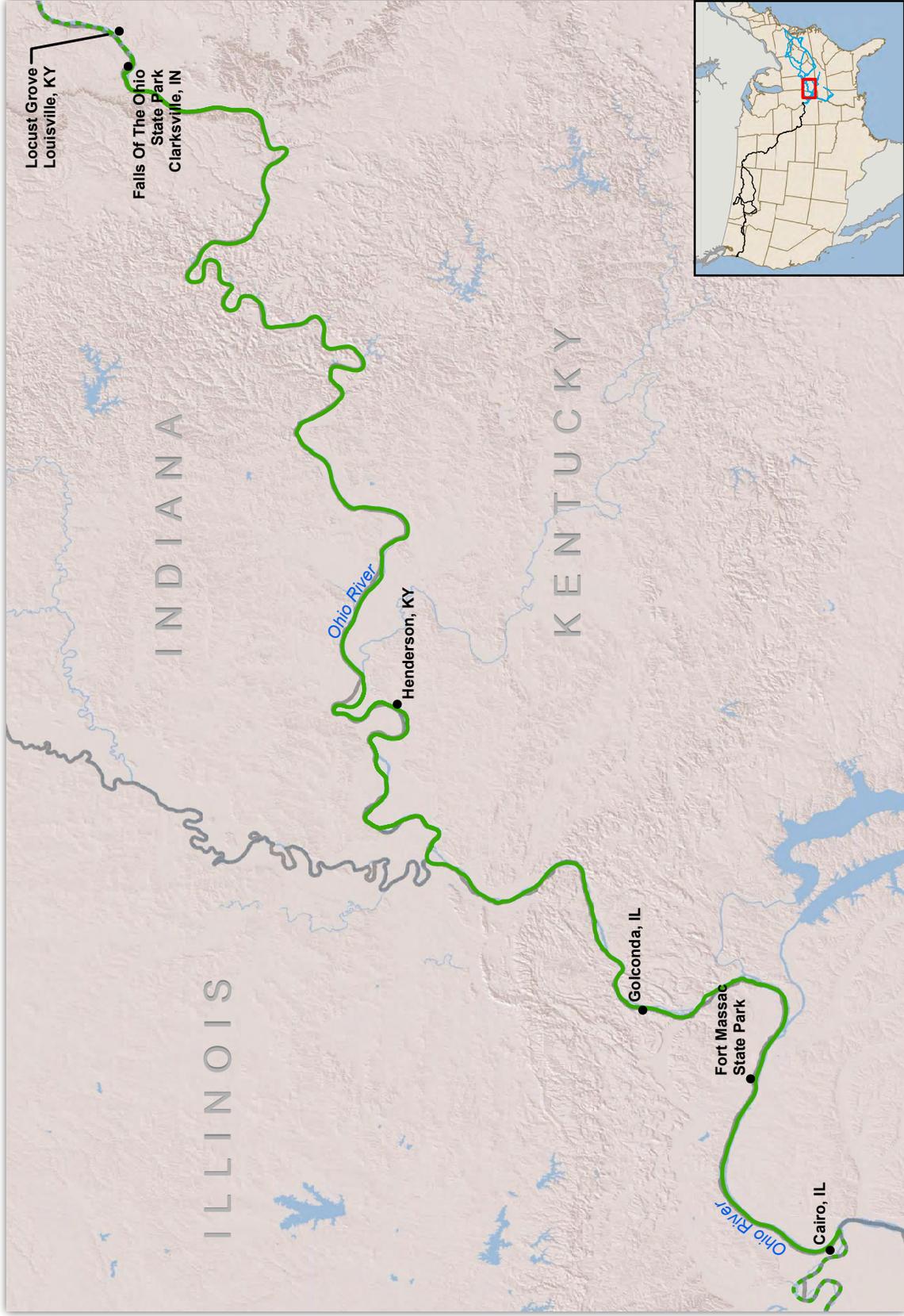


Segment 5A:
Nationally Significant Routes
(within Period of Significance)
Lewis: Aug. 31 - Oct. 14, 1803;
Pittsburgh, PA to Louisville, KY

Other Nationally
Significant Routes
(within Period of Significance)
Lewis & Clark: Oct. 26 - Nov. 14, 1803;
Louisville, KY to Cairo, IL
Lewis & Clark: Nov. 14 - Dec. 12, 1803;
Cairo, IL to Wood River, IL

Produced by
Midwest Region
Geospatial
Support Center
0 12.5 25 50 Miles
Coordinate System:
USA Contiguous Albers Equal Area Conic
The NPS makes no warranty, express or implied,
related to the accuracy or content of this map.

Figure 6: Segment 5B - Louisville, Kentucky to Cairo, Illinois



Segment 5B:
Nationally Significant Routes
 (within Period of Significance)
 Lewis & Clark: Oct. 26 - Nov. 14, 1803;
 Louisville, KY to Cairo, IL

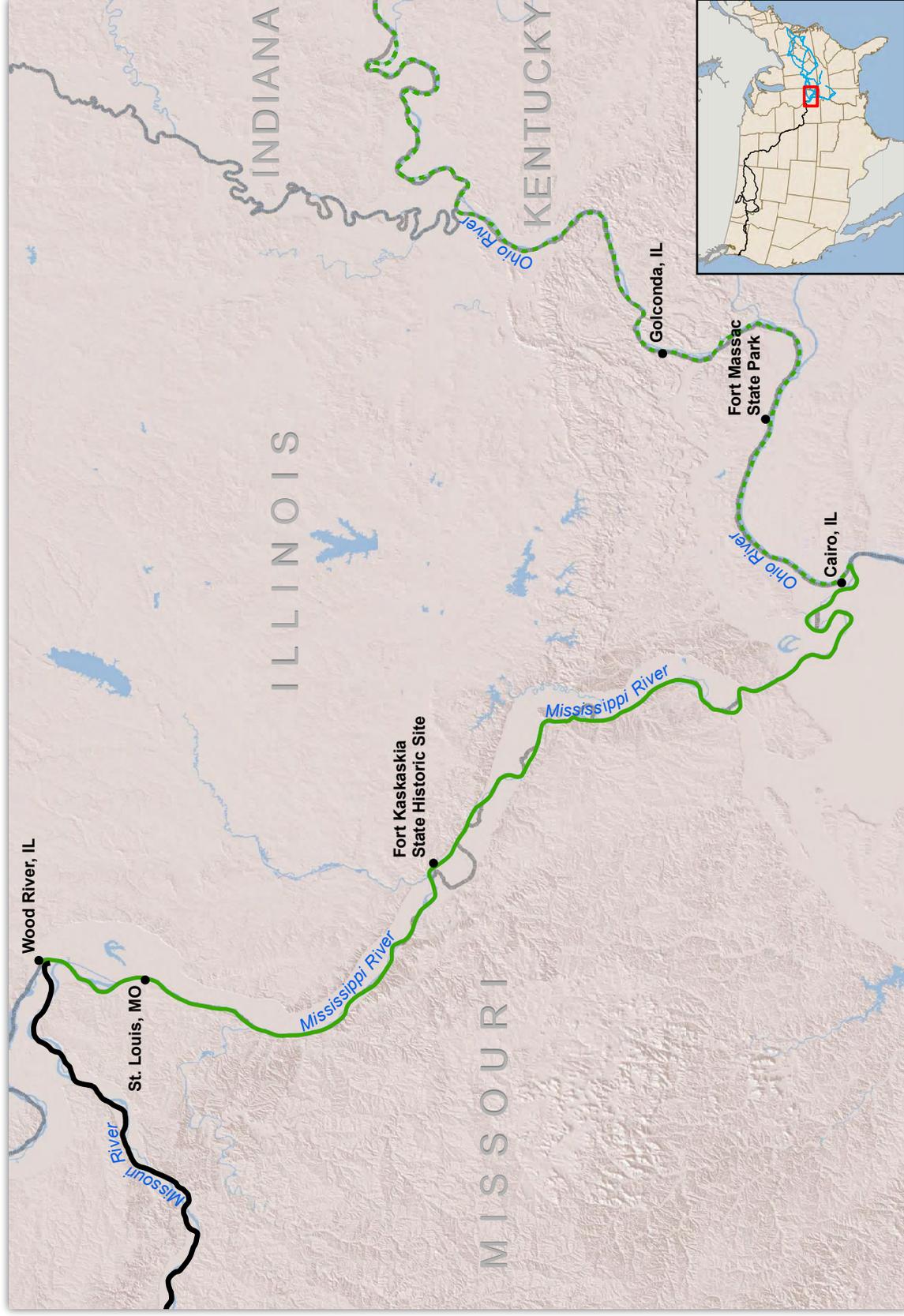
Other Nationally Significant Routes
 (within Period of Significance)
 Lewis: Aug. 31 - Oct. 14, 1803;
 Pittsburgh, PA to Louisville, KY
 Lewis & Clark: Nov. 14 - Dec. 12, 1803;
 Cairo, IL to Wood River, IL

Produced by:
 Midwest Region Geospatial
 Support Center

Scale: 0 7.5 15 30 Miles

Copyright © 2017
 USA Contiguous Albers Equal Area Conic
 The NPS makes no warranty, express or implied,
 related to the accuracy or content of this map.

Figure 7: Segment 6 - Cairo, Illinois to Wood River, Illinois



Segment 6:
Nationally Significant Routes
(within Period of Significance)
Lewis & Clark; Nov. 14 - Dec. 12, 1803;
Cairo, IL to Wood River, IL

Other Nationally
Significant Routes
(within Period of Significance)
Lewis: Aug. 31 - Oct. 14, 1803;
Pittsburgh, PA to Louisville, KY
Lewis & Clark: Oct. 26 - Nov. 14, 1803;
Louisville, KY to Cairo, IL

Existing Lewis & Clark
National Historic Trail

Produced by
Midwest Region Geospatial
Support Center

0 5 10 15 20 Miles

Coordinate System:
USA Contiguous Albers Equal Area Conic
The NPS makes no warranty, express or implied,
related to the accuracy or content of this map.

Evaluation of Criterion 11C (Potential Use and Interest)

It must have significant potential for public recreational use or historical interest based on historic interpretation and appreciation. The potential for such use is generally greater along roadless segments developed as historic trails and at historic sites associated with the trail. The presence of recreation potential not related to historic appreciation is not sufficient justification for designation under this category.

This criterion is very similar to **Required Element Two**: *The areas adjacent to such trails, to be used for scenic, historic, natural, cultural, or developmental purposes.* (See the following feasibility chapter.)

The NPS evaluated the lands adjacent to the proposed extension trails (route segments 5a, 5b, and 6) to determine if “significant potential” for public recreation and historic interest exists. Comprehensive tables (appendixes B1, B2, and B3) list and describe sites with scenic, historic, natural, cultural, or developmental value. Some sites were queried from NPS databases, including the National Register of Historic Places, the NHL program, and the National Natural Landmarks (NNL) program. Other sites and areas were identified from the Protected Areas Database of the United States Geological Survey, state and local GIS offices, commercially available atlases, tourism brochures, and Google Earth.

Several sites along the trail extension routes have a direct and substantial connection to Lewis and Clark, and some of those sites, such as museums, parks, visitor centers, and historic sites, currently interpret the history of the Expedition. The tables in appendixes B1, B2, and B3 also include venues that have the potential to interpret the trail in the future. There are many other areas with scenic, historic, natural, or cultural value adjacent to the trail that have no direct connection to Lewis and Clark, including national forests, state parks, state historic sites, nature preserves, and conservation areas. If the Lewis and Clark National Historic Trail is extended, the management plan would be updated to propose specific areas for historic and interpretational development. Those sites with a direct association with the trail that qualify for national significance would be included in the high potential sites section of the management plan should the study routes be designated.

Conclusion

The NPS finds that criterion 11C is met for route segments 5a, 5b, and 6. There is potential for historical interest, interpretation, and appreciation for these three trail extension routes.

Evaluation of Individual Sites Associated with the Eastern Legacy

The NPS examined individual sites associated with the preparation and return phases of the Expedition, as directed by the study legislation.

Much work has already been done to evaluate the sites related to the preparation and return phases of the Expedition. This study relied heavily upon the “Lewis and Clark Eastern Legacy Study” by John S. Salmon, prepared in 2007 for the NPS.

That study found that some sites in particular were critically important to Lewis’s preparation for the Expedition:

- The White House, where President Jefferson drew up the presidential orders and discussed the Expedition with Lewis, and where Lewis and Clark returned upon completion of the journey; and
- Monticello, where President Jefferson and Lewis met regularly to plan the Expedition; and
- The American Philosophical Society in Philadelphia, Pennsylvania, where Lewis underwent training in the sciences to prepare for recording the journey

Salmon’s study (2007) evaluated the three sites listed above and found they had all previously been determined to possess national significance and had been designated as national historic landmarks. Each of these sites has contributed to American history in many ways, and the Lewis and Clark story is just one aspect of their significance. The NPS finds that the associations of these sites with Lewis and Clark’s eastern travels should be more adequately documented, but that no further national recognition is necessary given their status as national historic landmarks.

Additional sites related to the preparation and return phases of the Expedition are already protected by the NPS, including the Harpers Ferry armory, the Cumberland Gap, and Meriwether Lewis’s death site (on the Natchez Trace Parkway).

Given this level of prominence and protection, the NPS finds that the most significant sites do not need to be added to the national historic trail. Other sites related to the preparation and return phases do not meet the same standards for national significance for their relationship to the Expedition (Salmon 2007), and the NPS finds that they are most appropriately protected and commemorated at the local, state, or regional level.

Conclusion

The NPS finds that no additional designations are warranted at the site level at this time. The trail superintendent may find ways to collaborate with individual sites in the future, as time, capacity, and interest allow.

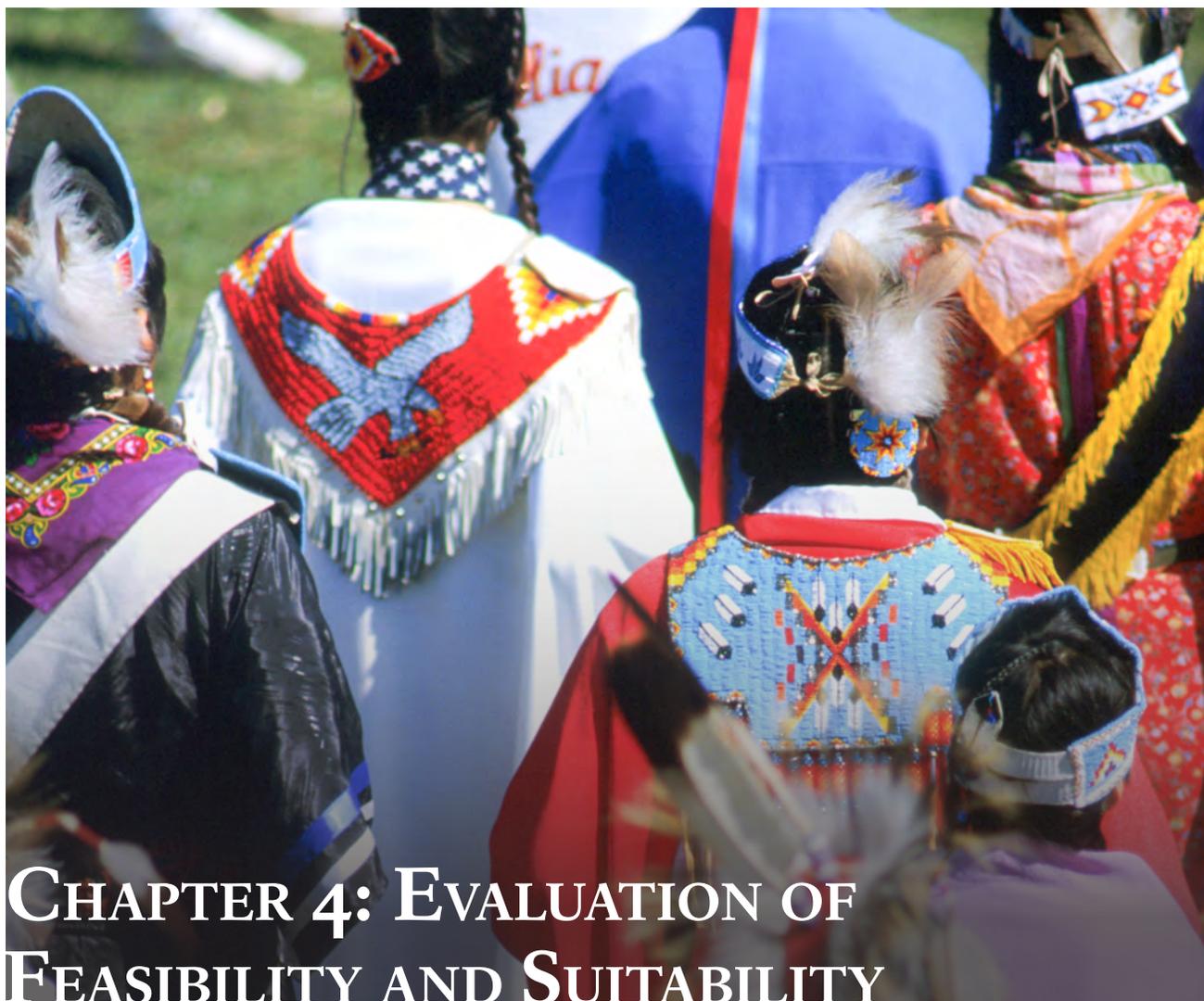
See appendix C for a full list of sites that were evaluated in the course of this study.

National Significance Conclusion

Determining where the Corps of Discovery's journey began and ended is a difficult task. It could be argued that everything the members of the Expedition did to prepare themselves contributed to their success. From Lewis's tutelage at the hands of the President and scientists in Philadelphia, and from Clark's distinguished career in the US Army, to the hunting and competitive games of the young men of the Expedition, their life experiences certainly added to the story and contributed to the successful outcome of the Expedition. While the later lives of the Corps of Discovery team members were certainly influenced by their epic trek, their actions following the completion of the Expedition do not necessarily increase the national significance of that event.

- The NPS finds that three route segments definitively meet the significance criteria established by the NTSA and are eligible to be added to the existing Lewis and Clark National Historic Trail:
 - » Segment 5a, the water route from Pittsburgh, Pennsylvania to Louisville, Kentucky, near the Falls of the Ohio
 - » Segment 5b, the water route from Louisville, Kentucky, near the Falls of the Ohio, to the confluence of the Ohio River and the Mississippi River (near present day Cairo, Illinois)
 - » Segment 6, the water route from the confluence of the Ohio River and the Mississippi River (near present day Cairo, Illinois) to the winter camp at Wood River, Illinois
- The NPS finds that all other preparation and return routes studied do not meet the criteria for national significance for national historic trails as established in criterion 11 of the NTSA, and are not eligible to be added to the existing national historic trail. These routes are most appropriately recognized at the local, state, or regional level. The NPS feels that this is a viable and appropriate action for all study routes.
- The NPS finds that the individual sites most closely associated with the preparation and return phases of the Expedition have already been acknowledged, and that no further designation is necessary to protect and interpret these locations. These sites do not meet the criteria to be added to the existing national historic trail.

Intentionally left blank



CHAPTER 4: EVALUATION OF FEASIBILITY AND SUITABILITY

Introduction

In addition to criteria 11A, 11B, and 11C, discussed in the previous chapter, a proposed trail must address 10 required elements in section 5 (16 USC 1244(b)) of the NTHSA. These 10 requirements outline the basis for evaluating the feasibility and suitability of designating a national historic trail or trail extension.

Feasibility of designating a national historic trail or formally extending an existing trail is evaluated on whether it is physically possible to develop a trail along a route being studied and whether the development and administration of a trail would be financially feasible.

Suitability, also defined as desirability when addressing national historic trails, considers whether a proposed trail, or trail extension, is already adequately represented within the system, or is comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector. For trail extensions, suitability evaluates if there is additional public benefit to be gained by extending the trail.

National Historic Trail Required Elements

The 10 required elements for national historic trails are listed below and discussed individually.

- 1 The proposed route of such trail (including maps and illustrations).
- 2 The areas adjacent to such trails, to be utilized for scenic, historic, natural, cultural, or developmental purposes.
- 3 The characteristics which, in the judgment of the appropriate secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 USC 461).
- 4 The current status of land ownership and current and potential use along the designated route.
- 5 The estimated cost of acquisition of lands or interest in lands, if any.
- 6 The plans for developing and maintaining the trail and the cost thereof.
- 7 The proposed federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the Department of Agriculture).
- 8 The extent to which a state or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof.

- 9 The relative uses of the lands involved, including: the number of anticipated visitor days for the length of, as well as for segments of, such trail; the number of months which such trail, or segments thereof, will be open for recreation purposes; the economic and social benefits which might accrue from alternate land uses; and the estimated man years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail.
- 10 The anticipated impact of public outdoor recreation use on the preservation of a proposed national historic trail and its related historic and archeological features and settings, including the measures proposed to ensure evaluation and preservation of the values that contribute to their national historic significance.

Required Element One: *The proposed route of such trail (including maps and illustrations).*

The proposed route of the Lewis and Clark National Historic Trail extension includes the travels of Lewis from Pittsburgh, Pennsylvania to Louisville, Kentucky. It was at Louisville that Lewis and Clark met, near the Falls of the Ohio. Lewis, Clark, and several other members of the Corps of Discovery then journeyed from Louisville to the start of the established trail at Wood River, Illinois using the Ohio and Mississippi Rivers.

The first segment of the proposed extension (segment 5a) begins at Pittsburgh, Pennsylvania and follows the Ohio River to Louisville, Kentucky, near the Falls of the Ohio. The second segment of the proposed extension (segment 5b) starts at Louisville, Kentucky, near the Falls of the Ohio and continues down the course of the Ohio River to the Mississippi and Ohio Rivers' confluence near present day Cairo, Illinois.

The final proposed segment (segment 6) is oriented north on the Mississippi River from the Mississippi and Ohio Rivers' confluence (near present day Cairo, Illinois) in Wood River, Illinois.

The combined total estimated mileage for the proposed trail extension is 1,196 miles. The entire length of the proposed trail extension is located on rivers. See figures 5, 6, and 7 for detailed maps of the proposed trail extension.

Most national historic trail routes are mapped at very coarse scales and their specific historic locations are often not known at the time of study and/or designation. In this case, it is known that the explorers used the river routes, and it is known that the rivers migrated over time to their present locations. The proposed route allows for land-based routes adjacent to the rivers.

Required Element Two: *The areas adjacent to such trails, to be used for scenic, historic, natural, cultural, or developmental purposes.*

Comprehensive tables (appendixes B1, B2, and B3) list and describe sites with scenic, historic, natural, cultural, or developmental value. Some sites were queried from NPS databases, including the National Register, the NHL program, and the NNL program. Other sites and areas were identified from the Protected Areas Database of the United States Geological Survey, state and local GIS offices, commercially available atlases, tourism brochures, and Google Earth.

Several sites along the proposed trail extension routes have a direct and substantial connection to Lewis and Clark, and some of those sites, such as museums, parks, visitor centers, and historic sites currently interpret the history of the Expedition. The tables also include venues that have the potential to interpret the trail in the future. Other areas with scenic, historic, natural, or cultural value adjacent to the trail that have no direct connection to Lewis and

Clark include national forests, state parks, state historic sites, nature preserves, and conservation areas. If the Lewis and Clark National Historic Trail is extended, the management plan would be updated to propose specific areas for historic and interpretive development. Those sites with a direct association with the trail that qualify for national significance would be included in the high potential sites section of the management plan should the study routes be designated.

Required Element Three: *The characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 USC 461).*

The Midwest Regional Office of the NPS prepared a significance statement as part of this study, reviewed by two experts on the history of the Expedition. Following peer review the statement was revised and forwarded to the National Park System Advisory Board in 2015.

The statement was submitted to the National Park System's National Historic Landmarks Committee, which at its November 16, 2015 meeting, unanimously voted to approve and forward the nomination to the full Advisory Board. The Advisory Board, in turn, approved the nomination at its June 2016 meeting.

The results of the significance review are summarized in the previous chapter, and the full document submitted to the Advisory Board is included as appendix A.

Required Element Four: *The current status of land ownership and current and potential use along the designated route.*

The proposed trail extension route consists entirely of river segments. The trail centerline is defined as the center of the current river channel instead of the historic river channel that existed in the early 19th century. The trail corridor is defined as a 1-mile buffer on either side of the trail centerline. Land use and land ownership characteristics will be considered within this 2-mile corridor.

All of the proposed trail segments can be publicly accessed by boat. Many public recreation areas exist along the proposed segments (appendixes B1, B2, and B3) and stretches along the river are appropriate for all types of boating. However, much of the river has been industrialized and most of the land adjacent to the rivers is privately owned. Approximately 93.23% of the river segment corridors is owned by private individuals or organizations, 2.27% is privately owned but used for conservation purposes, 2.06% is owned by state governments, 2.26% is owned by the federal government, and 0.17% is owned by regional and municipal governments (table 4).

Evaluation of specific zoning or other land use controls in place at the local level, and individual land ownership analysis, is reserved for implementation-level planning in the event the existing Lewis and Clark National Historic Trail is formally extended.

Modern roads and rights-of-way follow many of the proposed segments. On existing roads and highways, auto tour routes could be designated and signed. In 2009, the University of Wyoming conducted an inventory of all of the auto tour routes on the existing trail and concluded there was 6,157.8 miles of Lewis and Clark auto tour route. Thus, it is reasonable to assume the proposed extension could designate hundreds or even thousands of miles of auto tour routes along its path.

Existing public rights-of-way and conservation easements could be used to access both public and private sites along the trail. The NPS could assist private landowners interested in providing controlled public access to trail resources. However, private landowners are under no circumstances obligated to participate in any trail partnership opportunities.

Extending the Lewis and Clark National Historic Trail into the study area would not alter any potential future land uses. Incremental development on lands near the trail would probably continue, but none of these land use changes could be attributed directly to the trail. Due to its minimal effects on the landscape, designating the trail extension would likely not change land values along the trail corridor.

Required Element Five: *Estimated cost of acquisition of lands or interest in lands, if any.*

No federal land acquisition is anticipated if the routes are designated as part of the Lewis and Clark National Historic Trail. If any land would be acquired, it would only be acquired on a “willing seller basis” as authorized by Congress in the *Omnibus Public Land Management Act of 2009* (123 Stat. 997, Sec. 5301, March 30, 2009). The existing Lewis and Clark National Historic Trail has not acquired land to develop trail corridors in the past. Trail designation would not affect the legal rights of any landowners along the trail corridor and all landowners would retain full ownership and control over their properties.

The cost of administering the national historic trail extension would depend on cooperative partnerships among the NPS, other public agencies, private landowners, nonprofit organizations, federally recognized American Indian tribes, and other entities.

Administering the extended trail, if designated, would depend on future funding and priorities. The approval and transmittal of a feasibility study does not guarantee that the extension would be designated or that funding and staffing needed to implement the proposed extension would be forthcoming.

Table 3 shows land ownership along the current trail using the United States Geological Survey National Gap Analysis Program Protected Areas Database. The table considers land ownership within a 2-mile corridor along the trail centerline.

Table 3: Land Ownership along Designated Lewis and Clark National Historic Trail

Ownership Status	Percent Ownership
Private	62.32
Federal Government	30.40
State Government	5.59
Tribal Land	1.32
Private Conservation	0.29
Local and Regional Agencies	0.08
Unknown	<0.01

Table 4 shows land ownership along the proposed Lewis and Clark National Historic Trail using the United States Geological Survey National Gap Analysis Program Protected Areas Database. The table considers land ownership within a 2-mile corridor along the river centerline.

Table 4: Land Ownership Along Proposed Trail Extension

Ownership Status	Percent Ownership
Private	93.23
Private Conservation	2.27
State Government	2.06
Federal Government	2.26
The Nature Conservancy	0.04
Local and Regional Agencies	0.17
Unknown	0.01
Tribal Land	None

Required Element Six: *The plans for developing and maintaining the trail and the cost thereof.*

Costs Expected to be Borne by NPS

If Congress extends the Lewis and Clark National Historic Trail, the comprehensive management plan for the existing trail would need to be updated. The plan would detail the recreational and interpretive opportunities along the trail and provide cost estimates. The creation of such a plan would cost between \$300,000 and \$500,000. Plans of this nature typically address trail administration over 15 to 20 years.

The federal budget to administer the trail would need to be increased if the trail is extended. The current annual operating budget for the existing Lewis and Clark National Historic Trail is \$2.0 million. Part of this budget supports the 18 full-time equivalent (FTE) employees of the existing trail. A trail extension would require additional operating funds of approximately \$500,000 per year. The potential budget would account for one or two FTE staff positions focusing on public engagement and education and one FTE community planner to organize partnership opportunities and administer the trail. This annual budget reflects the need for trained professionals to work on various aspects of trail interpretation and administration.

The cost estimate is consistent with the cost structure in the current operating budget of the existing Lewis and Clark National Historic Trail. The current budget was divided by the length of the trail (approximately 3,700 miles). This cost per mile value was then applied to the nationally significant segments of the proposed trail extension, which would be approximately 1,196 miles long. This budget estimate does not take into account other costs that may be incurred by partners for trail development, nor any strategies to protect trail resources.

Other costs associated with the trail are usually single expenditures, and includes production of brochures, publications, and signs as well as partner support for trail management. These costs are typically derived from the annual operating budget for a national historic trail. Staffs of national historic trails often conduct further research to identify high potential historic sites and segments. A preliminary inventory to identify and more precisely define high potential sites and segments would cost between \$3.5 million and \$4 million (per Cattle Trails Study, NPS 2014). Such expenditures could be spread out in increments over a number of years.

Costs Expected to be Borne by Partners

The NPS does not usually construct or operate national historic trail visitor centers, although these types of facilities provide partnership opportunities for the agency designated as the trail administrator. The cost of construction for an interpretive or visitor center would depend on location, size of the structure, and the services and amenities offered at the center. Although much of the Ohio and Mississippi riverfronts are privately owned, several protected areas and recreation lands are in the proposed trail extension. Facilities and amenities, including boating and other recreational opportunities, are already present. Additional recreational amenities could be expanded in the foreseeable future.

Trail development projects help to expand interpretive and recreational opportunities along the trail. If the trail extension is designated, some development projects could include the construction of information kiosks, shelters, interpretive exhibits, restrooms, parking areas, and walkways. Expenses such as these would include single expenditures for initial design and development, but would require some periodic maintenance and upkeep by the landowner or administrator. Construction expenses would require the active participation of trail partners and a commitment to provide maintenance to the structures or trail. The estimated cost for a trail development project is provided in table 5.

Signs are very important for segments of the trail following existing roads and highways. Sign costs are also single expenditures over the short term but would require maintenance and replacement over longer periods. Sign costs are provided in table 5 for city and county roads as well as state and federal highways.

The Lewis and Clark National Historic Trail does not typically develop trails, relying instead on partner organizations to do so. However, other national historic trails have led the construction of trails that retrace the historic route. Trail retracement greatly expands the recreational opportunities of a national trail but is generally only undertaken for short distances along national historic trails. Trail retracement would be a onetime initial expense for design and construction, but would entail periodic maintenance costs. By their nature, and as described in the NPS, national historic trails are not usually continuous; instead they are noncontiguous segments where some original trail may be present. There would be no need to complete a full retracement of the route from end to end. The cost of retracement is dependent on the materials used. A 10-foot-wide asphalt trail with vegetation clearing, leveling, and paving could cost between \$200,000 and \$300,000 per mile. Retracement of an earthen trail, which only includes vegetation clearing and leveling, could cost between \$50,000 and \$75,000 per mile. Construction techniques should be designed to be sustainable and would minimize natural, historic, cultural, and aesthetic resource impacts.

All of the figures stated above are based on fiscal year 2013 figures. The cost estimate supplied in table 5 reflects the amount indicative of a typical project and costs incurred when administering national historic trails. The exact costs will vary depending on the resources and materials used.

Table 5: Estimated Costs for Trail Administration and Development Projects*

Item Description	Estimated Cost – Low Estimate	Estimated Cost – High Estimate
COSTS EXPECTED TO BE BORNE BY NPS		
Additional staffing	\$300,000 annually	\$500,000 annually
Management plan (includes the environmental assessment, design of the document, technical editing, as well as printing, binding, and shipping)	\$300,000 (simple environmental assessment)	\$500,000 (complex environmental impact statement)
Official map and guide (for 230,000 copies)	\$50,000	Relevant to size, format, and number of copies
Archeological and historic surveying of sites and segments (carried out as funding becomes available)	\$3,500,000	\$4,000,000
COSTS EXPECTED TO BE BORNE BY PARTNERS		
Trailhead development for foot trails and/or water trails (includes two interpretive exhibits, one kiosk/shelter, restroom, parking area with 10 spaces, and walkway)	\$120,000	\$550,000
Visitor / interpretive center (if needed)	\$250,000	\$1,500,000
Trail signing per mile (includes two directional signs, two site identification signs, two original route signs, and two auto tour / local tour signs)	\$3,200/mile (county and city roads only)	\$16,000/mile (includes county, state, and federal highways)
Interpretive wayside (per panel)	\$1,000 (fabrication and shipping)	\$1,300 (upright panel)
Trail retracement per mile (4% grade with 10-foot-wide asphalt trail, which entails vegetation clearing, leveling, and paving)	\$200,000/mile	\$300,000/mile
Trail retracement per mile (95% earthen nonmotorized trail, which entails vegetation clearing and leveling)	\$50,000/mile	\$75,000/mile

*Trail development estimates are provided by NPS Intermountain Trails Office. These are one-time costs only, and do not include upkeep or life-cycle costs.

General Cost Considerations

Trail construction activities can be very expensive. If the NPS was required to bear these costs for the entire extent of the trail, then designating the trail extension would not be feasible. Trail development is only feasible if most or all of these costs are borne by trail partners. The reliance on partners means there are multiple potential funding sources available to build trails. Many of these expenses would be incurred over long periods, so all funding need not be available at one time.

The completion and transmittal of a feasibility study does not guarantee that funding and staffing needed to implement the action alternative would be forthcoming.

All trail development projects on private lands are completely voluntary. Under no circumstances are private landowners required to retrace the trail or provide any right-of-way to access trail resources. All landowners would retain full legal rights to their property regardless of whether or not the Lewis and Clark National Historic Trail is formally extended.

The NPS cautions that the proposed trail extension may not be feasible if expected partnership opportunities and Congressional funding are not realized. In this case, it would not be feasible for the existing Lewis and Clark National Historic Trail to administer additional trail segments.

Required Element Seven: *The proposed federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the US Department of Agriculture).*

The Secretary of the Interior, who was tasked with writing the feasibility study in PL 110-229 section 343, would designate a lead federal administering agency if the national historic trail is extended. The lead federal agency would work in partnership with federal, state, and local agencies; private landowners; federally recognized American

Indian tribes, and others along the Lewis and Clark National Historic Trail. The great majority of the study routes are located on or adjacent to private land, with portions being owned by federal, state, and other public entities.

The NPS currently administers the existing Lewis and Clark National Historic Trail. Thus, the NPS is the most logical choice to administer any possible trail extension for cost and administrative efficiency. The NPS has a successful history of working with a broad variety of trail partners from many organizations including federal, state, local, and private sources.

Required Element Eight: *The extent to which a state or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof.*

No land acquisition is anticipated (see required element five above) for the potential national historic trail extension. Therefore, states or other political subdivisions would play limited or no role in land acquisition.

The present Lewis and Clark National Historic Trail maintains partnerships with hundreds of public and private organizations across the United States. Three of these partners engage with the trail at the national level: the Lewis and Clark Trail Heritage Foundation, the Partnership for the National Trails System, and the Lewis and Clark Trust.

The Lewis and Clark Trail Heritage Foundation was formed shortly after designation of the original trail and has worked very closely with the NPS, Bureau of Land Management, and US Forest Service in supporting and managing the trail. Members of the Lewis and Clark Trust support the trail in areas of preservation and education and are advocates of including Eastern Legacy routes in the Lewis and Clark National Historic Trail. Both of these organizations are expected to take an active role in promoting and developing the trail extension, should the routes be designated as part of the national historic trail.

This study identifies several additional federal, state, and local agencies as well as private organizations along the proposed trail extension segments with which partnership opportunities may be possible (table 6). Comments received to date indicate a willingness to partner with the NPS from communities along the studied trail segments, including those not found to be nationally significant in this study. The comments indicate strong local interest in preserving the history of Lewis and Clark.

Although private landowners and local governments are invited to partner with the NPS on the Lewis and Clark National Historic

Trail extension to provide public access to trail segments on private or inaccessible lands, they are by no means required to do so. All private landowners and local governments will retain all legal rights to their respective lands regardless of whether the trail extension is designated.

The following organizations contacted the NPS during the study process and expressed an interest in partnering in trail activities. In addition, the NPS received offers of partnership from many organizations along the study routes later determined to not meet the criteria necessary to be added to the existing trail. Overall, the NPS finds there is strong potential for partnering along the studied routes.

Table 6: Partnership Opportunities for the Trail Extension*

Organization/Site	Location
Venture Outdoors	Pittsburgh, Pennsylvania
Friends of the Riverfront	Pittsburgh, Pennsylvania
Wickliffe Mounds State Historic Site	Ballard County, Kentucky
Fort Jefferson Memorial Cross Park	Ballard County, Kentucky
Fort Defiance Park	Cairo, Illinois
River Discovery Center	Paducah, Kentucky
National Quilt Museum of the United States	Paducah, Kentucky
William Clark Market House Museum	Paducah, Kentucky
Red House Interpretive Center	Cape Girardeau, Missouri
Indiana Department of Natural Resources (Falls of the Ohio State Park)	Indianapolis and Clarksville, Indiana
Missouri Department of Natural Resources	Jefferson City, Missouri
Land Between the Lakes National Recreation Area (Golden Pond Visitor Center)	Golden Pond, Kentucky
Clarksville Parks and Recreation Department	Clarksville, Indiana
Ohio River Greenway Development Commission	Jeffersonville, Indiana
Frazier History Museum	Louisville, Kentucky

* It is assumed that many additional partnership opportunities exist in Cincinnati, Louisville, Pittsburgh, Wheeling, and other major cities along the route. This short list is of organizations that have already indicated an interest in partnering with the NPS.

Required Element Nine: *The relative uses of the lands involved, including: the number of anticipated visitordays for the length of, as well as for segments of, such trail; the number of months such trail, or segments thereof, will be open for recreation purposes; the economic and social benefits that might accrue from alternate land uses; and the estimated man years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail.*

Most of the land that the study segments pass through is privately owned. Therefore, it is very difficult to get an accurate estimate of the number of visitors to sections or sites along the trail except from those sites that monitor visitation (e.g., museums and visitor centers) on a daily basis. Visitor use along national historic trails is typically quantified through compilation of these data at specific sites. This is the closest approximation that can be made for anticipated visitor use and visitor days. Table 7 lists the annual number of visitors at national park system units located near the proposed trail extension study segments.

Table 7: Number of Visitors in 2014 at National Park System Units near the Lewis and Clark National Historic Trail Eastern Legacy Extension

National Park System Unit	Location	2014 Recreational Visits
William Howard Taft National Historic Site	Cincinnati, Ohio	23,609
Lincoln Boyhood National Memorial	Lincoln City, Indiana	99,795
Jefferson National Expansion Memorial	St. Louis, Missouri	1,817,091
Ulysses S. Grant National Historic Site	St. Louis, Missouri	40,287

National historic trails are typically discontinuous in nature and typically provide recreational and historic opportunities at discrete sites and segments along the trail. No private landowners are required to allow access to the trail should the trail extension be designated, nor are private landowners obliged to develop trail resources along any designated segments.

The NPS expects the trail to be open for recreation all months of the year. Recreational uses along the rivers could occur at public launch sites and other publicly accessible areas in proximity to the riverfronts. While some of these activities occur on the designated trail along the Missouri River, the proposed extension would add portions of the Ohio and Mississippi Rivers for additional recreational opportunities.

The socioeconomic analysis in Chapter 7: Environmental Consequences of this study projects positive economic benefits from the establishment of national park system units in general. Since the trail corridor is narrow (2 miles wide) and would not displace any existing land uses, any alternate land use benefits would be negligible. Any economic benefits that result from trail designation can be quantified by the Money Generation Model, which calculates economic benefits brought to an area by designating a national park system unit near that area. Social benefits come in the form of public education about Lewis and Clark, their Expedition, and how it forever changed the history of the United States.

Annual operating costs for the proposed trail extension are anticipated to be approximately \$500,000, with a total of two or three person-years of civilian employment. The employment expenditures would consist of two or three FTE positions and would supplement the current 18 FTE employees and \$2.0 million operating costs of the existing trail. This staffing may need to be supplemented during the initial trail administration development process.

In 2014, the existing Lewis and Clark National Historic Trail recruited 2,233 volunteers who logged a total of 165,933 hours, an average of approximately 74 hours per volunteer (as reported by trail staff). Given the length of the current Lewis and Clark National Historic Trail (approximately 3,700 miles) and the length of the potential extension (approximately 1,200 miles), the additional routes are approximately one-third of the length of the existing trail. Thus, it is reasonable to assume the additional routes would obtain an additional 33% of the volunteers and volunteer hours of the existing trail. An approximate estimate for the trail extension is 737 volunteers and 54,758 volunteer hours per year. This may be underestimated because the states with the study routes (Illinois, Indiana, Kentucky, Missouri, Ohio, Pennsylvania, and West Virginia) have much larger populations than most of the states along the existing trail.

Four units of the national park system are in the immediate vicinity of the study routes (William Howard Taft National Historic Site, Lincoln Boyhood National Memorial, Jefferson National Expansion Memorial, and Ulysses S. Grant National Historic Site). These units also keep data on annual volunteers and volunteer hours. The visitation to these units is reported above in table 7.

Required Element Ten: *The anticipated impact of public outdoor recreation use on the preservation of a proposed national historic trail and its related historic and archeological features and settings, including the measures proposed to ensure evaluation and preservation of the values that contribute to their national historic significance.*

When Lewis and Clark traveled along the study routes in the early 19th century, most evidence of their presence was ephemeral in nature. Encampments were set up at night only to be packed away for travel the next day. Few objects would have been left behind, meaning there is little opportunity for archeologists and trail users to find artifacts related to the Expedition. Thus, impacts of trail use on archeological and historic resources related to the Expedition are expected to be minimal. Other historic and archeological sites may be present in the study area, given the long history of use in prehistoric and historic times. Trail-related activities would not be expected to impact these resources to any great extent. See Chapter 7: Environmental Consequences for more details.

Despite the large percentage of land not in federal ownership, public outdoor recreational opportunities along and near the trail are available. These opportunities primarily exist along public lands and rightsofway, but trail enthusiasts may potentially access trail sites and segments on private lands, with the consent and cooperation of the landowner. River corridors offer ample potential recreational opportunities. The impact of such use on the preservation of the proposed trail extension and its related historic and archeological features and settings would be mitigated through appropriate and consistent literature disseminated to the public, as well as measures that fall under section 6 of NEPA, section 9 of the Archaeological Resources Protection Act of 1979, and section 304 and section 106 of the National Historic Preservation Act of 1966 (NHPA).

If a national historic trail extension is designated, the existing trail's comprehensive management plan would be updated to address the issues and necessary actions required to ensure evaluation and preservation of the values that contribute to the national historic significance of the proposed national historic trail. In addition, sites and segments that are selected

as high potential would be flagged according to their degree of sensitivity. Those rated as highly sensitive would be kept confidential by the federal government if disclosure may result in substantial risk of harm, theft, or destruction of the site. Private landowners would not be subject to these regulations. Overall, designation is likely to raise awareness of any remaining historic resources in the study area.

Conclusions Regarding Feasibility and Suitability

The NPS finds that the proposed trail extension meets required elements one through ten of the NTSA outlined in section 5(b); therefore, the feasibility and suitability of designating a trail extension can be evaluated.

Feasibility

The NPS has determined that the proposed trail extension, which includes only the routes found to be nationally significant (segments 5a, 5b, and 6), **would be feasible to administer** as a national historic trail.

Findings and supporting information for feasibility are detailed below:

- It is physically possible to establish a trail or auto tour routes along the extension routes.
 - » The actual routes used by the explorers are well documented, and while the rivers have migrated over time, they can still be followed today.
 - » While most of the land base along the proposed extension routes is in private ownership, trail segments on private lands could be rerouted to the road network or other locations where rights-of-way exist or can be developed.
- Many locations adjacent to the proposed trail could offer benefits to visitors for recreational, educational, and interpretive purposes.

- Expected impacts on natural and cultural resources would be minimal; these impacts can be minimized and mitigated through planning and compliance with legal requirements.
- Trail designation would have minimal impacts on surrounding land uses and land values because any land- or water-based trail would be compatible with most existing land uses.
- The overall costs to the government to administer the trail would be substantial, but may not be prohibitive. The existing Lewis and Clark National Historic Trail can use existing staff and office infrastructure to begin administering a trail extension, but those existing resources would not be adequate to meet expanded responsibilities in the long term. One-time and ongoing expenses would include the following items:
 - » Extending the existing trail would require additional staff for outreach, partnering, compliance, and other activities in the expanded geographic area.
 - » Additional funds would be required to produce, update, and maintain publications and signs throughout the extended trail area.
 - » Actual trail development costs are not expected to be borne by the government. Rather, if these activities take place, they would be completed by organizations, private individuals, or local governments.

- » Please see table 5 on page 51 for more information.
- No land acquisition is anticipated by the federal government. If land is acquired by the federal government, it would be on a “willing seller basis” as authorized by Congress in the *Omnibus Public Land Management Act of 2009* (123 Stat. 997, Sec. 5301, March 30, 2009)
- All activities to create and administer the trail would be expected to be long-term. Partnering, creating trail infrastructure, and providing additional signage would all be implemented incrementally, over several decades, to accommodate budgets and staffing demands.

The NPS concludes that the proposed trail extension is feasible, but trail development and partnering activities would be realized over time, not immediately upon designation. Designation would not guarantee that additional funding would be made available. Projects and activities would take place as funding and staffing allow. NPS administration would vary based on federal budgets, staffing levels, and partner capacity.

The NPS also finds that the proposed trail extension may not be feasible if expected partnership opportunities and Congressional funding are not realized. In this case, it would not be feasible for the existing Lewis and Clark National Historic Trail to administer additional trail segments, and any benefits from trail designation would be lessened or realized over a longer period.

It is important to note that extending the trail beyond the routes that have been found to be nationally significant would decrease the feasibility for the NPS to administer the trail. Each additional mile, state and county contact, partner organization, and associated American Indian tribe increases the complexity and cost of administration.

Suitability

The NPS has determined that the proposed trail extension **would be a suitable addition** to the existing Lewis and Clark National Historic Trail. While the story of the Expedition is adequately told on the existing trail, inclusion of segments 5a, 5b, and 6 would broaden the story to include preparation activities that were of national importance.

Findings and supporting information for suitability are detailed below:

- The proposed trail extension routes are nationally significant as they relate to the Expedition.
- The trail extension would aid in the interpretation of the Expedition, particularly the activities that happened in the preparation for the Louisiana Territory. While these stories can be told on the currently designated trail, the trail extension would increase opportunities for interpretation and education.
- The trail extension would highlight additional Lewis and Clark-related recreational opportunities along the Ohio and Mississippi Rivers.
- The trail extension would engage additional partners and stakeholders in trail management and related activities. Several individuals and organizations have expressed interest in working with the NPS to extend the trail (table 6).

The trail extension would likely have a small positive impact on both the existing trail and the extension routes in terms of awareness and educational opportunities. It is expected that additional interest in the trail would result in increased visitation and educational opportunities along the entire trail. This element is discussed further below.

The story of the preparation and Expedition is already being interpreted at many existing sites (e.g., Harpers Ferry, Locus Grove, and Monticello), which are not part of the Lewis and Clark National Historic Trail. The NPS has a history of collaborating with nontrail sites that have a strong connection to the designated Lewis and Clark National Historic Trail.

The NPS concludes that the three proposed extension route segments (5a, 5b, and 6) are a suitable addition to the existing trail. Other routes studied are not suitable for addition to the national historic trail, but could be appropriately recognized at the local, regional, or state level. State and local constituents are encouraged to collaborate with the NPS Rivers, Trails, and Conservation Assistance (RTCA) program to develop trail projects and community preservation projects highlighting Lewis and Clark history.

Impact on Tourism

The legislation directing the study includes the following requirement:

Section (B) Impact on Tourism: In conducting the study, the Secretary shall analyze the potential impact that the inclusion of the Eastern Legacy sites is likely to have on tourist visitation to the western portion of the trail.

Analysis

The bicentennial celebration of the Expedition (known as the Corps of Discovery II) took place between 2003 and 2006. The bicentennial commemorated the Expedition from 1803 to 1806 by visiting historic sites along the known route of the Expedition, including several study sites. Additionally, the Corps of Discovery II visited several large cities that were never visited by the original Corps of Discovery. The bicentennial celebration was a massive effort to educate the public and illustrate the importance of the Expedition. The publicity and large-scale organization behind the Corps of Discovery II created excitement about the Expedition. This widespread interest was a driving force behind this study.

Corps of Discovery II data (appendix B4) are representative of the daily visitor contacts on sites along the route during the bicentennial; however, the number of visitors during the Corps of Discovery II is not truly representative of visitor contacts outside of special events. Visitor contacts at these sites have lower visitation rates outside of special events.

Trends from the Corps of Discovery II data suggest the population at locations where events were held did not factor in the number of visitor contacts. For example, in 2003, the Corps of Discovery II visited primarily Eastern Legacy sites. In Washington, DC, there was an average of 375 visitor contacts per day over the 21 days in the area. Washington, DC has a population of approximately 632,323. However, in Ashland, Kentucky, there was an average of 1,008 visitor contacts per day over the 5 days in the area. Ashland, Kentucky has a population of 21,684. Based on visitor contacts during the four years of the Corps of Discovery II, it can be concluded that rural areas largely outperformed urban areas in visitor contacts per capita. This illustrates smaller communities may identify more strongly with the Expedition than larger cities.

In 2003, the Corps of Discovery II visited locations east of the Mississippi River and these sites averaged 7,185 visitors per site. Between 2004 and 2006, the Corps of Discovery II visited sites associated with the Expedition west of the Mississippi River. Average visitors per site actually increased in 2004 and 2005 compared with 2003 (table 8). Thus, it is reasonable to conclude activities associated with the eastern sites would only increase interest along the existing Lewis and Clark National Historic Trail. The NPS can also conclude that enthusiasm for Lewis and Clark is not restricted to either the western or eastern parts of the Expedition. Visitors throughout the country are interested in learning more about the Expedition.

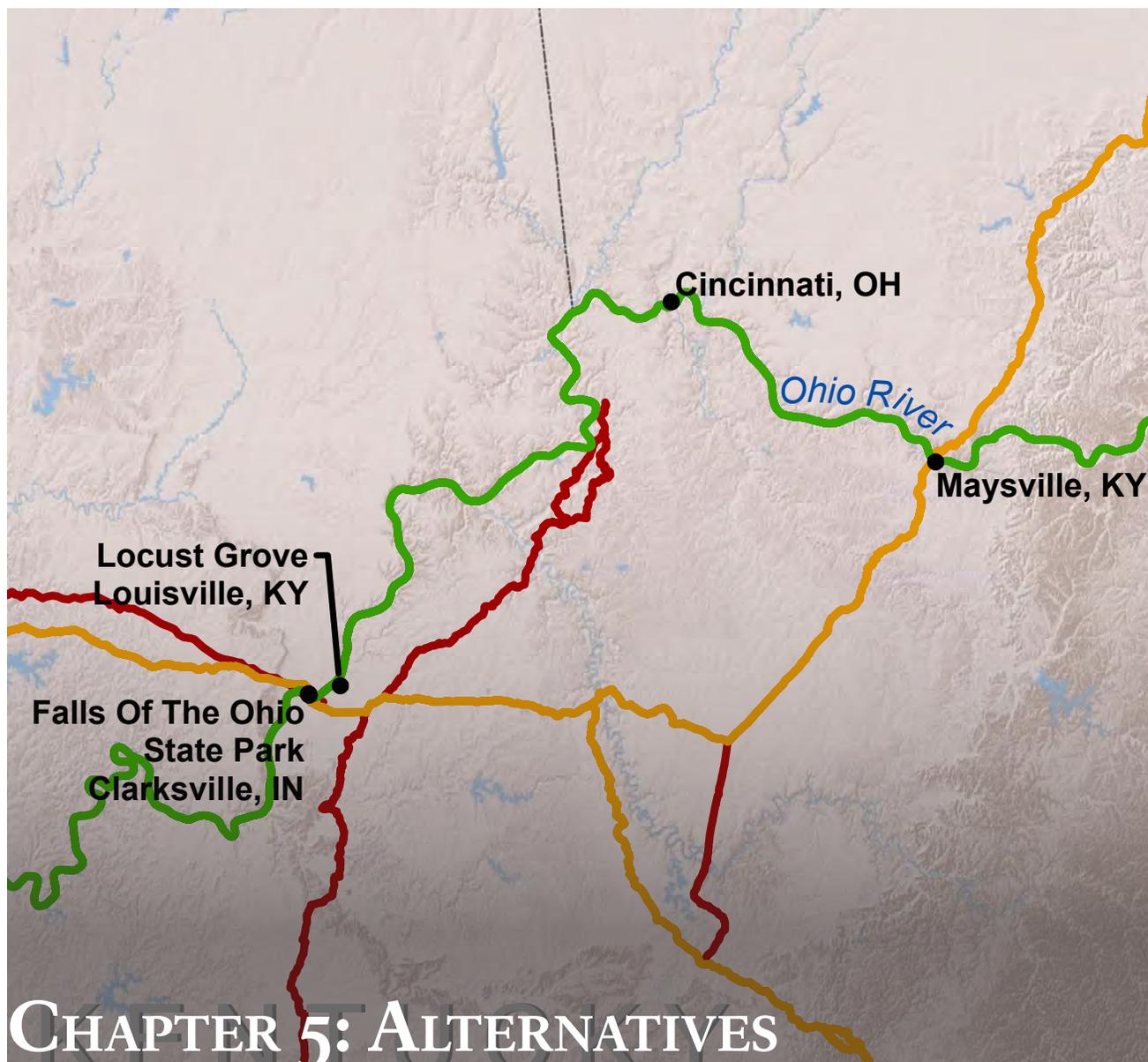
Table 8: Bicentennial of Lewis and Clark 2003–2006

Year	Number of Sites	Total Visitor Contacts	Average Visitors per Site
2003	24	172,440	7,185
2004	23	231,038	10,045
2005	27	273,517	10,130
2006	21	148,359	7,064

Conclusion

The NPS concludes that the proposed trail extension would likely positively impact tourism on the existing Lewis and Clark National Historic Trail. Extension of the trail would result in additional federal, state, local, and private organizations coordinating and interpreting the Lewis and Clark story. As a result, tourism related to the Expedition would likely increase minimally for all portions of the trail.

Intentionally left blank



Introduction

As required by NEPA, the NPS planning process requires the development, analysis, and public review of different alternatives for assessing project goals while minimizing negative impacts on the environment. A reasonable range of alternatives must be developed, including a baseline alternative

where no action is taken. The existing conditions provide a baseline to which the impacts caused by alternative proposals can be compared. The action alternatives examine options for trail designation and potential federal, state, and local involvement.

Trail Administration and Management

To evaluate each alternative, it is important to have a good understanding of what it means to “administer” and “manage” a trail, which are different activities.

The NPS actively administers many national historic trails. Administrative responsibilities include trailwide leadership, including coordination and strategic planning, resource preservation and protection, certification, interpretation, developing cooperative/interagency agreements, and providing limited financial assistance to other government agencies, landowners, and interest groups.

Management responsibilities rest with private landowners, local land-managing agencies, and other organizations that have ownership jurisdiction for national historic trail-related land and resources. Site-specific land use plans govern the management actions of federal and state agencies. National historic trail management responsibilities include site planning and compliance with applicable laws and regulations; developing trail segments or specific sites, including trail construction, site interpretation, site stabilization, and protection; and managing visitor use.

Administration activities would focus on preserving the historic experience of the Corps of Discovery, stressing the need to maintain and enhance the historic character of high-potential sites and segments while also emphasizing developing trail experiences that would benefit both traditional and modern communities.

General guidance for trail planning and administration originates from the purpose of the trail, as established by Congress; the national significance of the trail and its fundamental resources and values; the primary interpretive themes that convey the trail’s significance; and federal, state, and county legal and policy requirements the more general body of laws and policies that apply to the Lewis and Clark National Historic Trail.

Various government agencies, organizations, and private individuals own or manage land and resources along national historic trails, and these entities are responsible for trail resources on their lands. The NPS has broad authority under the NTSA to provide support for management activities and can also provide technical assistance to land owner and land managers when requested, as funds and resources allow.

Collaboration and cooperation with other governmental agencies, as well as private individuals and organizations, is the guiding management philosophy of the NPS for national historic trails. The main role of the NPS is to provide the methods and means for trail interpretation and protection. Partners then carry out these methods and means with assistance from the NPS where possible.

Alternatives

The planning team considered two alternatives in detail: a no action alternative and one action alternative for designating a national historic trail extension. The alternatives are discussed in this chapter. Implementation of the action alternative and any subsequent planning and administration would depend on Congressional designation and future funding and agency priorities. The approval and transmittal of a feasibility study to Congress does not guarantee that funding and staffing needed to implement the proposed alternative would be forthcoming.

Alternative A: No Action (No Trail Extension is Designated)

The no action alternative provides for a continuation of current conditions, and should be considered a “business as usual” scenario. There would be no federal designation of a national historic trail extension. The existing Lewis and Clark National Historic Trail would continue to focus most of its attention on the events and activities of the Corps of Discovery west of the Mississippi River, with goals of partnership formation, resource protection, and trail interpretation. Programs benefitting sites and segments related to Lewis and Clark east of the Mississippi River, which are already ongoing or have occurred in the past, could continue, but would receive no additional resources from the NPS.

Existing governmental agencies, nongovernmental organizations, and individuals would continue to manage trail segments and resources east of Wood River, Illinois without any additional federal involvement. The no action alternative means there would be no single overarching federal agency directed to help coordinate and interpret Lewis and Clark’s travels in the east, nor would there be any agency to protect trail-related resources.

Existing state, local, and tribal laws, as well as policies governing preservation and property rights, would remain in effect, but no further

federal action would be taken regarding the trail segments in the east. Public access available for sites currently in public ownership would continue. Existing trends in development would continue, potentially compromising the integrity of any remaining trail resources. Local-level planning would continue to balance goals for preservation of historical and cultural resources with the realities of incremental development.

Many eastern sites related to Lewis and Clark are already memorialized as national park system units, including Harpers Ferry National Historical Park in West Virginia, Cumberland Gap National Historical Park in Tennessee, and the Natchez Trace Parkway in Tennessee where Meriwether Lewis died of a gunshot wound near Grinder’s Stand in 1809. (The Natchez Trace Parkway also extends into Alabama and Mississippi.) Several other sites related to Lewis and Clark are commemorated as national historic landmarks or are listed on the National Register. These sites would continue to serve as educational and interpretive sites about Lewis and Clark even if the trail is not extended.

The NPS would continue to coordinate Lewis and Clark-related activities with eastern sites even if the trail is not extended. In 2003, the Corps of Discovery II, celebrating the bicentennial of the Expedition, visited several sites in Virginia, Maryland, Pennsylvania, West Virginia, Kentucky, Indiana, and Illinois. Several Lewis and Clark National Historic Trail certified sites exist on the eastern routes. NPS staff actively coordinates educational and outreach activities with organizations and sites in the east. The NPS is not prohibited from engaging in these activities even if the trail extension is not designated. However, the NPS would be more limited in engaging in these activities further because no additional resources or authorities would be available for additional outreach opportunities.

No additional federal funding would be required for this alternative.

Alternative B: Designate the Lewis and Clark National Historic Trail Extension from Pittsburgh, Pennsylvania to Wood River, Illinois

Under alternative B, Congress would designate three of the routes identified in this study as part of the existing Lewis and Clark National Historic Trail. The included routes would be administered within the existing trail as one unit. To achieve this, the purpose statement and period of significance of the existing national historic trail would need to be updated.

Only trail segments that meet the criteria described in earlier chapters are eligible to be added to the national historic trail. Eligible route segments for this alternative are described as segments 5a, 5b, and 6 in previous chapters. These route segments include the Ohio River from Pittsburgh, Pennsylvania to Louisville, Kentucky; the Ohio River from Louisville to the confluence of the Ohio and Mississippi Rivers (near present day Cairo, Illinois); and the Mississippi River segment from Cairo, Illinois to Wood River, Illinois. Lewis traveled without Clark from Pittsburgh, Pennsylvania to Louisville, Kentucky as he gathered men and supplies. From Louisville to Wood River, Illinois, Lewis and Clark traveled together with most of the men who would become the Corps of Discovery.

The NPS would continue to administer the extended Lewis and Clark National Historic Trail through formal and informal partnerships with governmental agencies, nongovernmental organizations, and private landowners for resource protection, visitor experience, and education. All partnership opportunities are strictly voluntary. Under no circumstances are any individuals or organizations required to cooperate with the Department of the Interior on administration of the trail. All existing property rights and laws would remain in effect if any extension is designated.

The NPS could seek to establish new cooperative agreements (which may include transfers of funds, goods, or services) or agreements of

mutual understanding concerning shared goals for trail resource management with state and local institutions in the additional segments. This could include groups such as historic preservation offices; park, monument, and historic site managers and owners; and volunteer associations, including trail associations with interests in trail preservation, access, and use.

Other NPS responsibilities under this alternative may include the following activities in the additional segments:

- Providing leadership for volunteers, partners, and stewards. Trail resource stewards would include federal, tribal, state, and local government, as well as private landowner, organizations, and interested individuals.
- Providing current land managers with guidance and assistance to ensure that trail resources, qualities, and values are protected while providing for public enjoyment and appreciation.
- Maintaining data on trail resources, particularly high-potential sites and segments, including resource location, associated primary historic documentation, and archeological records, and making appropriate data available on public-facing websites.
- Working closely with other federal officers, other land managers, and landowners to provide coordination and technical assistance in establishing and following agency standards for identification, protection, and monitoring programs.
- Promoting and supporting projects resulting in high-quality mapping of trail resources and inventories of historic resources that document values, conditions, and setting qualities of segments and sites.

- Encouraging communities and partners to work in conjunction with the various state departments of transportation to establish local auto tour routes and ensure that signs meet their guidelines.
- Coordinating all interpretation and sign initiatives with federal and with nonfederal landowners and entities, and ensuring that interpretation and signs supported by federal funds follow the interpretive themes, plans, and design programs outlined in the updated comprehensive management plan.

Where funds and resources permit, the NPS could provide technical assistance to land managers and land owners to support compliance and applicable federal law and regulations. Any studies of trail resources supported by trail administration would comply with applicable state and federal guidelines for inventory and documentation standards.

If Congress acts on this alternative, the comprehensive management plan of the existing trail would need to be updated in the future. The plan would outline actions for resource protection and interpretation of the trail.

All trail segments and their resources would continue to be owned and managed by the current landowners. Appendixes B1, B2, and B3 provide lists of current recreation and historic sites proximate to the proposed national historic trail extension available for public use. These opportunities are currently provided by public and private landowners who could be potential partners for trail management and administration. Together, the NPS and these organizations could potentially provide greater access to sites along the trail. Participation in any trail partnership is completely voluntary, and any public access to private land along the trail is at the discretion of the private landowner.

National historic trails are usually discontinuous in nature. It is very unlikely a trail user would be able to hike, drive, or paddle the entire route from end to end. Instead, the trail

extension would likely result in recreation and interpretation at discrete sites along the route. Since a majority of the segment corridors are in private ownership, it would be difficult to complete a full retracement of the trail adjacent to the river corridors.

All existing federal, state, and local laws would continue to be enforced if this action alternative is implemented. American Indian tribes and state historic preservation offices (SHPOs) associated with the extended trail would be consulted prior to any actions to develop or interpret the trail. Existing trail partners, such as the Lewis and Clark Heritage Foundation and the Lewis and Clark Trust, would be expected to participate in the local management of the extended Lewis and Clark National Historic Trail, along with the local governments and other nonprofit partners.

The establishment of a trail extension would not change any existing state or federal regulatory processes, nor place any additional requirements on property owners regarding land use along the designated trail. This study determined there would be no impact on private properties as a result of designating this action alternative for the Lewis and Clark National Historic Trail.

It is important to note that the NPS would take no action to administer or partner on these segments unless and until any congressional action occurs.

Costs of Alternative B

Alternative B would require additional staffing to administer the trail and create and monitor partnerships. At a minimum, two additional FTEs would be needed for this purpose. In addition, existing trail staff would have expanded responsibilities for tribal consultation, state consultation, environmental compliance, interpretation, and education. The additional responsibilities would likely result in a need for additional staff for these divisions as well, even if there is extensive partnership support for the expanded trail. (See appendix E for more information on NPS staffing responsibilities for the trail.) The NPS estimates a need for an additional \$300,000 to \$500,000 per year in expenses for staff salary and benefits, which represent operating costs. No additional office space costs are included in this alternative, with the assumption that staff would be located at current NPS facilities or co-located with partners or other federal agencies.

Determining the precise route of the trail extension and appropriate activities along the extended trail would require an update to the trail's management plan. This process would cost an additional \$300,000 to \$500,000, and be completed over several years.

If the extension is designated, the NPS would seek to place signs along the route that can be followed by automobile. This is called the auto tour route associated with the trail. Providing signs along the trail extension could cost between \$3,000 and \$10,000 per mile. The NPS would also seek to develop interpretive waysides to provide information to visitors. These waysides cost approximately \$1,000 each. Signs for a 1,200-mile trail extension could be a significant expense. The NPS would seek partnerships and grant opportunities to fund these needs. Long-term facility maintenance costs associated with this alternative could include construction and maintenance of visitor centers, restrooms, parking areas, and other facilities. Those costs would be the responsibility of external partners, not the NPS.

See table 9 (repeated below) for additional costs that could be expected if a trail extension is designated. Congressional designation of an extension for the national historic trail does not automatically mean additional funding for the trail is available. If a trail extension is designated, any additional administration activities by the NPS would increase slowly over time.

Table 9: Estimated Costs for Trail Administration and Development Projects

Item Description	Estimated Cost – Low Estimate	Estimated Cost – High Estimate
COSTS EXPECTED TO BE BORNE BY NPS		
Additional staffing	\$300,000 annually	\$500,000 annually
Management plan (includes the environmental assessment, design of the document, technical editing, as well as printing, binding, and shipping)	\$300,000 (simple environmental assessment)	\$500,000 (complex environmental assessment)
Official map and guide (for 230,000 copies)	\$50,000	Relevant to size, format, and number of copies
Archeological and historic surveying of sites and segments (carried out as funding becomes available)	\$3,500,000	\$4,000,000

Item Description	Estimated Cost – Low Estimate	Estimated Cost – High Estimate
COSTS EXPECTED TO BE BORNE BY PARTNERS*		
Trailhead development for foot trails and/or water trails (includes two interpretive exhibits, one kiosk/shelter, restroom, parking area with 10 spaces, and walkway)	\$120,000	\$550,000
Visitor / interpretive center (if needed)	\$250,000	\$1,500,000
Trail signing per mile (includes two directional signs, two site identification signs, two original route signs, and two auto tour / local tour signs)	\$3,200/mile (county and city roads only)	\$16,000/mile (includes county, state, and federal highways)
Interpretive wayside (per panel)	\$1,000 (fabrication and shipping)	\$1,300 (upright panel)
Trail retracement per mile (4% grade with 10-foot-wide asphalt trail, which entails vegetation clearing, leveling, and paving)	\$200,000/mile	\$300,000/mile
Trail retracement per mile (95% earthen nonmotorized trail, which entails vegetation clearing and leveling)	\$50,000/mile	\$75,000/mile

*Trail development estimates are provided by NPS Intermountain Trails Office. These are one-time costs only, and do not include upkeep or life-cycle costs.

Alternatives Considered but Eliminated from Detailed Study

The NPS considered but rejected an alternative that would have the Secretary of the Interior designate the nationally significant Eastern Legacy study routes as “Connecting and Side Trails,” as stated in section 6 of the NTSA. This authority is occasionally used to designate short additions to national trails, primarily as they pass through federal properties. There were two reasons this alternative was dismissed. First, in order to designate trails under this authority, the Secretary of the Interior must have the consent of landowners in the trail corridor, which is not feasible for an extension of this magnitude on predominantly private property.

Second, the additional routes are outside the purpose and period of significance for the existing trail; therefore, adding the routes to the trail under this authority is not appropriate.

The NPS considered a separate trail designation that would be administered independently from the existing Lewis and Clark National Historic Trail and would focus on the Eastern Legacy story. This alternative was dismissed for being inefficient because it would require more resources than formally extending the existing trail and would make interpretational and educational programs more difficult to coordinate along the trail.

The NPS considered the alternative of seeking to designate the study routes as a national scenic byway. This alternative was rejected because it would not provide the same type of historic preservation, coordination, and recreational opportunities that a national historic trail would, and would not connect to the physical and organizational resources of the existing trail.

State and Local Designation

Most trail segments in the study did not meet criteria for national significance as defined by the NTSA (see table 2). Therefore, most trail segments in most states are not appropriate to be added to the existing trail. Individual states could designate a Lewis and Clark commemorative trail or series of trails, however, with associated resources to be managed by

the states, a commission, or a private entity. Designations or recognition of this type are not dependent on the NTSA criteria. All of the trail routes would be eligible to be designated under state or local authorities.

Both the act of designation and the management of a state-designated trail is something that can be done without NPS involvement and without Congressional action. The NPS feels that this is a viable and appropriate action for all study routes. State and local constituents are encouraged to collaborate with the NPS RTCA program to assist in coordinating trail projects highlighting Lewis and Clark history. Since this alternative requires no federal action or Congressional action, it was dismissed from further analysis in this study.



Introduction

The study area for the affected environment includes a 1-mile buffer on either side of the trail centerline, which is the river center point. The Lewis and Clark National Historic Trail extension includes segments within the states of Illinois, Indiana, Kentucky, Missouri, Ohio, Pennsylvania, and West Virginia.

Impact topics were chosen based on the presence and condition of resources along the trail and how designating the trail might affect those resources. Many cultural resources are found along the proposed trail extension in the study area. Although the conditions of many of these resources are unknown and any adverse impacts on cultural resources as a result of trail designation are expected to be minimal; historic structures, archeological resources, ethnographic resources, and cultural landscapes are retained for further analysis because of their importance to the trail.

The study area is also endowed with many natural resources. Due to the conceptual nature of this study and EA, it is difficult to predict the effect of trail designation on natural resources. However, impacts on soils, vegetation, and water resources were retained for further analysis because any trail development would likely adversely impact at least some quantity of these resources.

Consideration of the local and regional economy is an important component of environmental impact assessments. Due to its importance, the topic of socioeconomic is retained for further analysis despite that all impacts are anticipated to be beneficial.

Some topics were considered but then dismissed for further analysis. Usually a topic was dismissed because no impacts on the resource are anticipated as a result of trail designation even though the resource may be present in the study area. The dismissed topics include museum collections, wetlands and floodplains, threatened or endangered species, and prime and/or unique farmland (see Impact Topics Considered but not Analyzed in Detail).

Impact Topics Analyzed in Detail

This section describes the existing conditions of those resources and values that could be affected by designation of the nationally significant routes of the proposed trail extension as part of the Lewis and Clark National Historic Trail. This discussion provides the descriptive information necessary to understand the current conditions and the context for comparing alternatives for designation of the trail extension. The resource topics presented in this chapter correspond to the resource impact analyses presented in Chapter 7: Environmental Consequences.

Cultural Resources

Introduction

Cultural resources are defined in the NPS *Management Policies 2006* document and DO-28: *Cultural Resources Management*. The documents list and describe five different cultural resources: archeological resources, cultural landscapes, historic and prehistoric structures, museum objects, and ethnographic resources. Although each resource type is most closely associated with a particular discipline, an interdisciplinary approach is often necessary to properly evaluate and document particular resources. The Secretary of the Interior's standards encourage interdisciplinary collaboration by setting forth standard processes for preservation planning, identification, evaluation, and registration that apply to all cultural resource types. Thus, for example, historians, historical architects, archeologists, and historical landscape architects can all participate in a single survey to identify both historic structures and cultural landscapes. These resource types can be evaluated and documented in a single historic resource study, thereby increasing the study's effectiveness.

The resource types in the NPS *Management Policies 2006* and DO-28: *Cultural Resources Management* have been adapted for management purposes from the categories used for listing properties in the National Register: building, district, site, structure, and object. A cultural landscape might include buildings, structures, and objects and could be listed in the National Register as either a site or a district. Archeological resources may be listed in all National Register categories. National Register documentation often needs to reflect a multidisciplinary approach to resource evaluation.

Historic Structures

Few historic structures related to the travels of Lewis and Clark remain along the proposed routes of the trail extension. Many of the areas visited by Lewis and Clark were relatively undeveloped. However, many historic structures remain within the trail corridors that are not directly related to Lewis and Clark. Historic resources are protected by the NHPA, which created the National Register, the NHL program, and the SHPO. Currently, 3,194 properties, districts, buildings, sites, and structures are on the National Register in counties intersected by the trail corridor, including 114 in Illinois, 204 in Indiana, 1,138 in Kentucky, 666 in Missouri, 614 in Ohio, 239 in Pennsylvania, and 219 in West Virginia. Of these resources, 118 are in the NHL program within those same counties, including 9 in Illinois, 18 in Indiana, 10 in Kentucky, 41 in Missouri, 22 in Ohio, 12 in Pennsylvania, and 6 in West Virginia.

Archeological Resources

Archeological resources are the remains of past human activity and records documenting the scientific analysis of those remains. Archeological resources include stratified layers of household debris, weathered pages of a field notebook, laboratory records of pollen analysis, and museum cases of polychrome pottery. Archeological features are typically buried, but may extend aboveground; they are commonly associated with prehistoric peoples but may be products of more contemporary society. An archeological resource has potential to describe and explain human behavior. Archeological resources can provide information on family organization and dietary patterns to help explain the spread of ideas over time and the development of settlements from place to place.

No comprehensive archeological surveys have been conducted along any of the proposed trail extension routes. It is likely that few artifacts related directly to the Expedition exist along any of the proposed eastern trail routes because many of the sites Lewis and Clark visited were temporary. Campsites were typically set up at night and packed up in the morning with few nonperishable items left behind. Many sites important to the Expedition are already preserved and memorialized by federal, state, or local agencies, while other sites are preserved by private historic societies.

There is still potential for archeological resources to be present within the study areas that do not relate directly to the Expedition. American Indian tribes have inhabited the area for thousands of years, and Europeans began to settle the area in the 17th and 18th centuries. It is exceedingly likely that archeological resources related to these peoples remain along the eastern trail routes.

Ethnographic Resources

Ethnographic resources are basic expressions of human culture and the basis for continuity of cultural systems. A cultural system encompasses both the tangible and the intangible. It includes traditional arts and native languages, religious beliefs, and subsistence activities. Some of these traditions are supported by ethnographic resources—special places in the natural world, structures with historic associations, and natural materials.

Three main categories of ethnographic resources can be recognized along the eastern trail routes: sites, landscapes, and ethnographically important natural resources. Each of these types of resources relates to a different traditionally associated group such as an American Indian tribe or an ethnic enclave at different times throughout history (e.g., mythical, prehistoric, or historic) that remain important aspects of a shared cultural heritage.

Sites are usually single locations of specific importance to an identifiable group of people. Included in this category would be sacred sites, such as traditional burial grounds, American Indian spiritual locations, or “lookout points.” Many of these types of ethnographic resources are identifiable from extant features (i.e., graves), but some may require extensive consultation and local research to locate and record these properties.

Ethnographic landscapes include widespread areas for resource acquisition and/or transport, rock quarrying, or traditional hunting or fishing territories, as well as corridors such as American Indian trails or trade routes used by European settlers. In many cases, these resources may be claimed and interpreted differently by different groups of people. Regardless, these resources remain important to the area’s history.

Natural ethnographic resources include primarily seasonally available fish, deer, or ripening fruits and flowering plants. While arguably the most difficult to identify and protect, to many American Indians, these resources are integral to defining their traditional existence.

Cultural Landscapes

Cultural landscapes are settings people have created in the natural world. They reveal fundamental ties between people and the land.

Cultural landscapes along the proposed trail extension routes include rural deciduous forests and agricultural land and built-up urban and suburban areas. Rural landscapes in the area tend to have features closer to the conditions experienced by Lewis and Clark during their travels.

Natural Resources

Introduction

Natural resources are defined in the NPS Management Policies 2006 document and include physical resources and processes, biological resources and processes, ecosystems, and highly valued associated characteristics such as scenic views. Natural Resources Management Reference Manual #77 offers comprehensive guidance to NPS employees responsible for managing, conserving, and protecting the natural resources found in national park system units.

Soils

Soil is the unconsolidated portion of the earth's crust modified through physical, chemical, and biotic processes into a medium capable of supporting the growth of land plants. Soil extends from the earth's surface to the lower limit of biological activity. The soil volume includes a mineral fraction derived from geologic materials from the earth's crust; an organic fraction consisting of living, dead, and decomposing organisms and organic residues; and pore space containing air and water in varying percentages. Soil is three-dimensional, with layers (horizons) that vary in arrangement and thickness on different parts of the landscape. Soils are not static, but are in a dynamic equilibrium with the surrounding environment.

The United States Department of Agriculture classifies soils in a hierarchical fashion according to their properties, known as Soil Taxonomy. The highest level of this taxonomy is the soil order, a group of soils with broadly similar properties. Most of the trail corridor crosses Alfisols, a soil commonly associated with mid-latitude broadleaf deciduous forests. Other soil orders that the trail corridor passes through includes Mollisols, a soil associated with mid-latitude grasslands, as well as Inceptisols and Entisols, which are soils where the parent material has not been as significantly altered by climatic and biological influences.

Vegetation

Vegetation refers to the total assemblage of plant communities that occupy a given landscape. Much of the vegetation occupying the trail corridors of the proposed trail extension can be broadly classified as temperate deciduous forest and temperate grassland. Significant amounts of this vegetation have now been replaced by cropland, rangeland, or urban/suburban lands.

Water Resources

Water resources are sources of water that are useful or are potentially useful and include features such as rivers, lakes, glaciers, and groundwater. Adverse impacts on water resources resulting from development include discharge of pollutants into water sources, increased soil erosion or sedimentation, increased stormwater runoff, or poorly controlled stormwater.

Several significant and useful water sources are found within the proposed trail extension corridor including the Ohio and Mississippi Rivers. These rivers are used as a water source for agricultural and industrial production as well as residential uses. The rivers are also used for commercial transportation, mainly facilitating barge traffic both upstream and downstream.

National Natural Landmarks

National natural landmarks are sites that contain some of the best examples of biological and/or geological features remaining in the United States, regardless of land ownership. The NNL program was established in 1963 and is administered by the NPS. There are 24 national natural landmarks within counties intersected by the trail extension corridor. These include nine in Illinois, seven in Indiana, two in Kentucky, two in Missouri, and four in Ohio. These properties are typically managed by state agencies or private landowners.

Socioeconomics

Introduction

Socioeconomic impacts include changes to employment, occupations, incomes, tax bases, land use, land values, and infrastructure. This includes impacts on minority and low-income communities as specified in Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (February 11, 1994).

Land Ownership and Land Values

Land ownership was quantified in Chapter 3: Evaluation of National Significance and National Trails System Act and National Historic Trail Criteria. From table 4, it is clear that most of the land within a 1-mile corridor on either side of the trail centerline is privately owned. Only portions of land are owned by federal, state, and local agencies, although these lands could be used for trail purposes. However, it should be noted that the Ohio and Mississippi Rivers are classified as waters of the United States under the Clean Water Act and, therefore, can potentially be used for trail-related purposes.

Tourism and the Regional Economy

Tourism is an important industry in some areas adjacent to the proposed trail extension. Many recreational opportunities already exist along the proposed routes of the trail extension including four national park system units and two national forests (appendixes B1, B2, and B3).

The NPS quantifies the effects of national park system units on state and local economies using the Visitor Spending Effects model developed by the NPS in conjunction with the United States Geological Survey. The proposed trail extension corridor passes through seven states (Illinois, Indiana, Kentucky, Missouri, Ohio, Pennsylvania, and West Virginia) and the economic effects of national park system units on each state are listed in table 9. These effects are a function of the number of units each state has, the popularity of each unit, and the size of the population around each park system unit. In any case, it is clear that park system units have a positive effect on state economies.

Table 10: Effect of National Park System Units on State Economies Intersected by the Proposed Trail Corridor

State	Visitor Spending (millions)	Jobs	Labor Income (millions)	Value Added (millions)	Economic Output (millions)
Illinois	\$12.7	200	\$7.2	\$11.6	\$18.7
Indiana	\$76.5	1,200	\$33	\$53	\$95.3
Kentucky	\$114.7	1,800	\$49.6	\$82.5	\$146
Missouri	\$241.2	4,300	\$126.5	\$196.1	\$349.4
Ohio	\$155.0	2,700	\$99.8	\$126.9	\$225.3
Pennsylvania	\$395.6	6,700	\$216.0	\$331.0	\$566.2
West Virginia	\$65.8	1,000	\$27.0	\$42.7	\$75.1

Source: Thomas et al. 2015.

Visitor Use and Experience

High-quality visitor experiences have always been an important component in NPS administration and management. Visitor use and experience impacts are derived from visitor behavior, levels of use, types of use, time of use, and location of use. Impacts on visitor use and experience are projected to improve with trail designation.

Visitor use describes the ways in which a site is used. In this context, the site is the overall region with a specific focus on visitor resources in proximity to, or having particular relevance to, the historic interpretation of the trail.

Visitor experience is the overall perception of a place and is informed by factors such as adjacent attractions, proximity and relevance to the trails, and level of public access. The aesthetics of a site also help influence visitor experience by affecting how a visitor perceives a site.

Due to the difficulty of tabulating visitor use data for national trails, there has been no comprehensive inventory of visitor use along the existing Lewis and Clark National Historic Trail, although the number is estimated to be in the millions annually.

Visitation at national park system units located in and near the proposed trail extension corridor varies widely with 23,609 recreational visits to William Howard Taft National Historic Site in 2014 and 1,817,091 recreational visits to the Jefferson National Expansion Memorial in 2014 (table 7). Such numbers indicate an interest in the NPS within the proposed trail corridors.

Several other national park system units can be found along other eastern routes taken by Lewis and Clark that were not found to be nationally significant in this study. Two of these units, Harpers Ferry National Historical Park in West Virginia and Cumberland Gap National Historical Park in Tennessee, are directly related to Lewis and Clark. Harpers Ferry National Historical Park registered 261,202 visitors in 2014 while Cumberland Gap National Historical Park tabulated 879,934 visitors in 2014.

The best data available for analyzing visitor use are the visitation statistics from the 2003–2006 Corps of Discovery II Lewis and Clark Bicentennial celebration. The Corps of Discovery II traveled exclusively to sites east of the Mississippi River in 2003. From 2004 to 2006, the Corps of Discovery II traveled to sites west of the Mississippi River. The analysis performed in chapter 3 using these data showed that visitation to eastern sites only had positive effects on visitation to the western sites and also showed there is considerable interest in Lewis and Clark along the proposed trail corridor.

Impact Topics Considered but not Analyzed in Detail

This section identifies issues and impact topics dismissed from detailed analysis in this study and provide rationale for not retaining them for further analysis. Generally, an impact topic was dismissed from the detailed analysis for one or more of four reasons:

- 1 The resource does not exist in the study area.
- 2 The resource would not be affected by the proposal, or the effects are so small they cannot be reasonably measured.
- 3 Any impacts on the resource would be beneficial in nature.
- 4 Through the application of mitigation procedures, there would be little or no effect from the proposed alternatives, and there is little controversy on the subject or reasons to otherwise include the topic.

The NPS uses the concept of “no measurable effects” to determine whether impact topics are dismissed from further evaluation to concentrate its analyses on issues that are truly significant to the action in question, rather than amassing needless detail (Council on Environmental Quality (CEQ) NEPA regulations, 40 Code of Federal Regulations (CFR) 1500.1(b)). For each issue or topic presented below, if the resource is found in the study area or the issue is applicable to the proposed action, then a limited analysis of effects is presented with the dismissal discussion.

The following impact topics are dismissed from further consideration in this study.

Cultural Resources

Museum Collections

Museum objects are manifestations and records of behavior and ideas that span the breadth of human experience and depth of natural history. They are evidence of technical development and scientific observation, personal expression and curiosity about the past, common enterprise, and daily habits.

Museums along the proposed trail extension route contain some artifacts related to the Corps of Discovery, Merriweather Lewis, William Clark, or their relatives. These institutions include the Dubois County Museum in Jasper, Indiana; the National Quilt Museum of the United States in Paducah, Kentucky; and the William Clark Market House Museum in Paducah, Kentucky. Several other museums also exist within the trail corridors that do not necessarily contain artifacts related to Lewis and Clark or the Corps of Discovery.

It is not expected that designation of the proposed trail extension would yield many artifacts for museum collections. Any archeological surveys and excavations conducted by trail staff would be limited and localized. Collection of artifacts would be conducted in accordance with the updated management plan should the trail extension be designated. Therefore, this topic has been dismissed from further analysis.

Natural Resources

Wetlands and Floodplains

Wetlands are transitional areas between land and water bodies where water periodically floods the land or saturates the soil. Wetlands include marshes, swamps, bogs, riparian corridors, estuaries, and floodplains. A significant amount of trail corridor lies within wetland areas, especially floodplains. Two segments of the proposed trail extension follow the Ohio River from Pittsburgh, Pennsylvania to the confluence of the Ohio and Mississippi Rivers near present day Cairo, Illinois. Another segment follows the Mississippi River from Cairo, Illinois to Wood River, Illinois.

Any trail construction along these trail segments may result in negligible adverse effects on the operation of floodplains or other wetlands. Should a trail development project be planned, site-specific impacts would be assessed according to NEPA; EO 11988, "Floodplain Management," which prevents development in 100-year floodplains; and EO 11990, "Protection of Wetlands," which requires that impacts on wetlands be considered when taking federal actions. Therefore, this topic has been dismissed from further analysis.

Threatened or Endangered Species

The Endangered Species Act of 1973 (16 USC Sections 1531-1544) provides the framework for threatened and endangered species in the United States. An endangered species is one that is in danger of extinction within the foreseeable future throughout all or a significant portion of its range. A threatened species means a species is likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

Throughout the proposed trail extension intersects, 77 resources are managed or regulated by the Fish and Wildlife Service. After informal consultation with the Fish and Wildlife Service, it was determined that designating the trail would likely result in no adverse effect on listed species. Therefore, this topic has been dismissed from further analysis. If the trail is designated, site-specific consultation with individual Fish and Wildlife Service offices would be completed.

Prime and/or Unique Farmland

Prime farmland is defined by the Farmland Protection Policy Act as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.

Unique farmland is defined by the Farmland Protection Policy Act as land other than prime farmland that has a special combination of unique characteristics needed to economically produce sustained high yields of a specific crop.

Land not currently being used to produce crops can qualify as prime or unique farmland, but water or urban land is not subject to the law. Designation of the proposed trail extension as part of the Lewis and Clark National Historic Trail would not have any effects on prime or unique farmland because it would not permanently convert land ownership or land use along the trail corridor. Also, implementation of any trail development projects would not likely adversely affect such farmland. Any trail development project would follow existing laws, regulations, and policies with regard to prime or unique farmland. Thus, this topic has been dismissed from further consideration.

Other Impact Topics

Environmental Justice

The topic of environmental justice analyzes impacts on any socially or economically disadvantaged populations within the study area. EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to make the achievement of environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its activities on minority and low-income populations.

There are likely census tracts or other areas within the trail corridor that predominantly contain minority or low-income populations, but these populations would not be disproportionately affected by any adverse environmental or health effects because any adverse effects of the trail extension would be negligible. Minority and low-income populations would not bear any disproportionate environmental or health consequences; therefore, this topic has been dismissed from further analysis.

Indian Trust Resources

Indian trust resources are those resources held in trust for American Indians by the United States. These resources can be lands or specific resources granted by treaty. No known properties that can be classified as trust resources and no known resources along the proposed trail corridor have been protected through treaty or by other governments. As a result, Indian trust resources has been dismissed from further analysis.

Intentionally left blank



CHAPTER 7: ENVIRONMENTAL CONSEQUENCES

Introduction

NEPA is the national charter for environmental protection in the United States. This act is implemented through CEQ regulations (40 CFR 1500–1508). The Department of the Interior has established regulations for compliance with NEPA and CEQ regulations (43 CFR 46). The NPS has in turn adopted guidance for implementing NEPA and CEQ regulations, as found in DO-12: *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2012) and its accompanying handbook (NPS 2015). This study EA complies with NEPA and the procedures outlined in DO-12.

This chapter analyzes the potential environmental consequences, or impacts, associated with each alternative described in this study. NPS planning guidelines stipulate that an environmental assessment should be prepared for all national trail studies to evaluate the environmental implications of the alternatives. The alternatives are conceptual in nature and do not include any developmental activities or site-specific actions. Therefore, the assessment of potential impacts is also general in nature. The NPS can make a reasonable projection of some of the impacts but these projections are based on assumptions that may not be accurate in the future. The discussion also describes generalized measures to minimize potential impacts. The study does not intend to suggest that these measures would work for every site or should be applied without further study of specific sites.

Future actions must be preceded by site-specific compliance and consultations with the Environmental Protection Agency, Fish and Wildlife Service, SHPOs, THPOs, the Advisory Council on Historic Preservation (Advisory Council), interested American Indian tribes, and other state and federal agencies. It is anticipated that such documents would reflect a considerable shift in emphasis from qualitative to quantitative analysis. More specific NEPA documents prepared in conjunction with the development plans are connected to this broader NEPA document.

Environmental impact topics are those environmental resources that would potentially be adversely affected by the proposed action and allow for a standardized comparison of the potential environmental consequences that could result from each alternative. The resource categories considered relevant to this study are cultural resources, natural resources, and socioeconomics. Each of these resource types are explained in Chapter 6: Affected Environment. NEPA requires consideration of context, intensity, duration, cumulative impacts, and measures to mitigate impacts.

Methodology

The alternatives were evaluated for their effects on the resources and values determined during the scoping process. For each resource type, impacts were defined in terms of context, intensity, duration, and timing.

Direct, indirect, and cumulative effects are discussed in each impact topic. For all impact topics, the following definitions apply:

Beneficial: A positive change in the condition or appearance of the resource, or a change that moves the resource toward a desired condition.

Adverse: A change that moves the resource away from a desired condition or that detracts from its appearance or condition.

Direct: An effect that is caused by an action and occurs in the same time and place.

Indirect: An effect that is caused by an action but is later in time or farther removed in distance, but that is still reasonably foreseeable.

Short-term: An effect that would no longer be detectable within a short period, generally less than five years, as the resource is returned to its predisturbance condition or appearance.

Long-term: A change in a resource or its condition that does not return the resource to predisturbance condition or appearance and is considered essentially permanent.

Given the nature of the proposed action, which provides for designation as a national historic trail with no specific plan of development, there would be no direct effects resulting from the proposed action. All effects discussed in this chapter are therefore indirect effects; to avoid repetition, the term “indirect” is not repeated throughout the chapter.

The impacts of the alternatives, including the no action alternative, are assessed using the CEQ definition of “significantly” (1508.27), which requires consideration of both context and intensity.

Context: Significance varies with the physical setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effect in the locale rather than in the world as a whole. This means that the significance of any action may be analyzed within the appropriate context, such as society as a whole (e.g., human and national), the affected region, or the locality.

Intensity: This refers to the severity of the impact. The following should be considered in evaluating intensity:

- » Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect would be beneficial.
- » The degree to which the proposed action affects public health and safety.
- » Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- » The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- » The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- » The degree to which the action may establish a precedent for future actions with significant effects or

represents a decision in principle about a future consideration.

- » Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- » The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register or may cause loss or destruction of significant scientific, cultural, or historical resources.
- » The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- » Whether the action threatens a violation of federal, state, or local law or requirements imposed for protection of the impact.

Cumulative Impact Scenario Analysis Methodology

CEQ regulations require the assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impacts that result from incremental impacts of the action when added to other past, present, and reasonably foreseeable actions, regardless of what agency (federal or nonfederal) or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over time.” (40 CFR 1508.7).

The past, present, and reasonably foreseeable future actions contributing to cumulative effects in the study area are incremental development-related actions resulting from population growth and changing land uses. The cumulative actions are the result of thousands of independent land use decisions by private and public property owners along the proposed segments of the Lewis and Clark National Historic Trail extension. While the decisions of these parties may be somewhat influenced by designation of the segments as part of the national historic trail, they are primarily driven by local economic factors and other values that can be expected to vary across states and regions.

Land development activities and their impacts in the study area are described in more detail below. All are closely related and are considered collectively as part of the cumulative impact of land development. These land use trends are anticipated to result in incompatible development in the vicinity of the study route and related resources over time.

Cultural Resources

Cultural resource types that may be affected by designation and development of the trail extension include historic resources, archeological resources, ethnographic resources, and cultural landscapes.

Methodology

The NHPA requires federal agencies to establish programs for evaluating and nominating properties to the National Register and to consider their effects on listed or eligible properties.

Section 106 of the NHPA requires that federal agencies take the effects on properties listed or eligible for listing in the National Register into account during their actions and give the SHPO/THPO and Advisory Council a reasonable opportunity to comment. Although the NHPA does not require the preservation of such properties, it does require that their historic or prehistoric values be considered when assessing the costs and benefits of federal undertakings to determine what is in the public interest. The practical effect is to encourage agencies to seek ways to avoid or minimize damage to cultural resources. Agencies must recognize properties important at the local, regional, and national level. The goal of the process is to make sure that preservation is fully considered in federal actions.

Section 110 of the NHPA gives federal agencies positive responsibility for preserving historic properties in their ownership or control. Agencies are directed to establish preservation programs to identify, evaluate, protect, and nominate to the National Register historic properties under their ownership or control, whether they are of national, state, or local significance. The NHPA emphasizes cooperation with SHPOs and THPOs in establishing such programs.

Due to the conceptual nature of this study, potential impacts were assessed according to logic, experience, and professional judgment. Any activities related to trail designation or use that harm important cultural resources could be considered an adverse impact.

Potential Adverse Impacts on Cultural Resources

Cultural resources at access sites can be degraded by trail use and development if protection measures are inadequate. Resources could be degraded in a number of ways including

inadequate protection of artifacts and known archeological sites; inadequate research and scholarship regarding the importance, location, and integrity of resources; development as land uses change; and inadvertent damage from unknowing trail users.

Potential Measures to Minimize Adverse Impacts on Cultural Resources

Protection of cultural resources can most successfully be managed on a case-by-case basis, but certain measures can be recommended for all portions of the trail under the action alternative. Resource inventories should be conducted to document features on public lands and private lands along the trail. These resources should be identified and documented in coordination with the SHPOs, which may already have information on some of these resources. These actions should be taken to fully document resources, understand their historic importance, and control visitor use when necessary to protect resource integrity.

Alternative A (No Action)

No protection beyond what is already in place would result from this alternative. No surveys of cultural resources would be conducted along the trail extension corridor and all sites would continue to be managed as they are currently. Limitations on public access to private lands may result in indirect resource protection. Cultural resources could be adversely affected by incremental development on private land.

Conclusion: Overall, there would be long-term negligible adverse impacts on cultural resources under the no action alternative compared with alternative B, mainly resulting from incremental development.

Alternative B

Under this alternative, the comprehensive management plan of the existing Lewis and Clark National Historic Trail would be updated to include the proposed trail segments. Field surveys, archival research, and personal interviews could be conducted to inventory cultural resources along the trail corridor. The

comprehensive management plan would define strategies to protect any resources found in these inventories. Working relationships with SHPOs and THPOs would be defined in the plan as well.

Compliance with the NHPA would be required for a federal action and activities on federally owned land. The NPS, along with other federal agencies, SHPOs, and private interest groups would emphasize the importance of protecting cultural resources while providing for public enjoyment of the trail. Visitation and use in this alternative has the potential to be higher than in the no action alternative and, therefore, may have a greater potential to adversely impact cultural resources. These adverse impacts may be offset by greater public awareness afforded by the larger audience this alternative could be expected to draw.

Conclusion: Alternative B would provide the greatest amount of protection to cultural resources throughout the proposed trail corridor compared with the no action alternative as a result of coordinated federal administration of the trail extension. Thus, alternative B would result in long-term beneficial impacts on cultural resources in the study area.

Cumulative Impacts

Cultural resources tend to slowly deteriorate over time as these resources are lost to incremental development. Significant agricultural and urban development has occurred in the vicinity of the trail since the Expedition. Population growth and development continues to occur in the trail corridor, but this is occurring at a slower rate than many other parts of the United States. These rates of increase may decline further in the future.

Cultural resources related to Lewis and Clark may benefit slightly in the future by designating the trail extension due to the updated comprehensive management plan, which would identify strategies for cultural resource protection.

Natural Resources

Natural resources that may be affected by trail designation include soils, vegetation, water resources, and national natural landmarks.

Methodology

Any activity related to trail designation or use that reduces the survival or recovery of plant and animal species or reduces the natural function or appearance of habitat areas would be considered an adverse impact. The impacts assessment for natural resources was conducted in accordance with laws, orders, and guidelines discussed previously, as well as the Endangered Species Act, Clean Air Act, and Clean Water Act.

Due to the conceptual nature of the alternatives presented in this plan, more detailed impacts on natural resources would need to be assessed during more specific project or management planning. Natural resources, including rivers, may benefit as the public's interest in the trail grows and greater emphasis is put on the significance and value of protecting natural resources. Greater awareness could also result from the public's increased understanding of the interrelationship between the natural landscape and historic events.

Potential Adverse Impacts on Natural Resources

The many rivers and creeks that run through the study area and any historic segments of the proposed trail extension may be degraded by erosion and sedimentation, land cover and land use changes (which may result in a loss of resources), overuse by recreation users, and inadvertent damage from unknowing trail users.

Increased public use of a designated trail by watercraft could cause more fuel emissions and dumping of waste into surface water and air. Greater automobile use on land segments may result in more vehicle exhaust emissions. Increased trail use may also pose threats to native species and could result in the contamination of water or soil by waste products. Other adverse impacts may result from increased motorized and nonmotorized watercraft use. Disturbance to fish and other fauna and riparian vegetation may occur at points of increased visitor access between the water and land and from the watercraft motors on the river segments.

Potential Measures to Minimize Adverse Impacts on Natural Resources

Measures to reduce impacts may range from complete avoidance of sensitive areas and rare species' habitat to minimization of visitor access and development. Signage and interpretation should educate users on how to minimize impacts. The management entity should encourage the establishment of a stewardship and protection program for rivers and lands along the trail. Tree removal and the addition of impervious surfaces should be avoided in sensitive areas to minimize the indirect effects of increased runoff and degradation of soil and water quality. Any actions that would affect potential habitat for rare species should be avoided.

The trail comprehensive management plan should incorporate the expertise of natural resource specialists, landscape architects, and natural scientists, among others representing the federal, state, and local governments. Natural resource education could be incorporated into trail interpretation.

Alternative A (No Action)

Under this alternative, no actions associated with the trail would be taken to further degrade or enhance the quality of soils, vegetation, water resources, or national natural landmarks. Natural resource areas within the study corridors that are not already protected and monitored could continue to degrade from unmanaged use. Access points to and from the trail routes would remain unchanged. Current recreational uses may cause inadvertent harm to natural resources along the trail route.

Conclusion: Under the no action alternative, there would be long-term negligible adverse impacts on natural resources in the trail corridor due mostly to incremental development. No comprehensive plan would be developed to explicitly address natural resource protection.

Alternative B

Under this alternative, increased levels of visitor use and activity could have an adverse impact on the natural resources in the area. Management protocol for rivers, natural habitats, and public access points could be determined as part of the management plan. With appropriate management measures in place, natural resources could benefit from greater protection as visitors are directed to appropriate trail areas and restricted from accessing fragile resource areas and ecosystems. The trail comprehensive management plan could recommend measures to minimize adverse impacts on rivers, flora, and fauna, including stewardship, interpretive signs, use restrictions, and monitoring. Trail partners and volunteers could provide labor and management resources for these efforts.

Conclusion: Increased use would result in minimal adverse impacts on natural resources in the trail corridor if alternative B is implemented. Such adverse impacts could be mitigated by an updated comprehensive management plan, increased environmental education, and restoration efforts, which would not occur under the no action alternative. Overall, designating the trail extension would likely result in long-term minimal beneficial impacts on natural resources along the trail.

An updated comprehensive management plan that addresses the study routes added to the Lewis and Clark National Historic Trail would result in long-term minimal beneficial impacts on natural resources along the trail.

Cumulative Impacts

Natural resources in the study area have slowly deteriorated since the time of Lewis and Clark due to incremental urban and especially agricultural development. Such deterioration continues to occur but at a lower rate than many other areas of the country. Some natural resources in the area are protected by governmental agencies or other conservation organizations. Examples include Shawnee National Forest in Illinois and Hoosier National Forest in Indiana, both managed by the US Forest Service. Unprotected areas are expected to undergo further degradation in the future due to population growth and development.

Implementation of the action alternative may result in minor benefits to natural resources because the updated comprehensive management plan would outline strategies to protect natural resources along the trail. Since the plan would be implemented over the course of several years, it would be expected to result in long-term minor beneficial impacts on natural resources.

Socioeconomics

Socioeconomic factors included in this study are effects on the regional economy, land ownership, property values, tourism, and visitor use and experience.

Methodology

Contributions to the local economy and nearby communities that are attributable to trail use and development would be considered a beneficial impact. Any activity related to trail use and development that degrades the user experience, such as the development of incompatible land uses or inappropriate visitor facilities, would be considered an adverse impact. Users may be defined as residents, tourists, and other users of the proposed trail.

In this analysis, impacts were determined based on logic, experience, and professional judgment. Quantitative assessment was not used due to the inherent lack of precision in quantitative estimates that would result from applying broad assumptions to a general action like designating the trail extension as part of the Lewis and Clark National Historic Trail. Current policies and socioeconomic conditions constitute the baseline conditions for the no action alternative. The action alternative is assessed relative to the no action alternative.

Potential Adverse Impacts on Socioeconomics

Previous analysis in Chapter 3: Evaluation of National Significance and National Trails System Act and National Historic Trail Criteria and Chapter 6: Affected Environment has shown that socioeconomic impacts would be beneficial as a result of designating a national park system unit. Therefore, no significant adverse impacts are expected as a result of extending the Lewis and Clark National Historic Trail.

Potential Measures to Minimize Adverse Impacts on Socioeconomics

No significant adverse impacts are expected as a result of extending the Lewis and Clark National Historic Trail.

Alternative A (No Action)

No change in the socioeconomic conditions in local and regional economies would result from this alternative. Economic benefits from trail designation would not accrue and there would be no increase in tourism from the designation. Land use adjacent to the trail would continue as it has in the past and would likely be subject to further development. Recreational opportunities would remain similar to those currently available.

Conclusion: The no action alternative would have negligible and imperceptible impacts on socioeconomic conditions in the area. Current trends in socioeconomic variables would be expected to continue unabated in the study area.

Alternative B

Extending the Lewis and Clark National Historic Trail would likely have a beneficial impact on the local economy. Communities along the trail may benefit from increased tourism and spending as the trail is promoted. Local business owners could benefit from their proximity or association with the trail. The trail designation would not affect how private property owners in the vicinity of the trail use their property. No additional laws and regulations would affect the use of private lands along the trail corridor. No federal land acquisition would be envisioned if this alternative is implemented.

Promotion of the trail and its associated resources would result in more visitors to the trail. Users could benefit from interpretive, educational, and recreational opportunities afforded by the trail. Higher levels of use would be expected where resources are clustered or near population centers.

Conclusion: Alternative B would have long-term beneficial impacts on socioeconomics due to increased visitor spending and expanded recreational opportunities. These combined effects would be expected to increase economic activity near the trail in some capacity. Such impacts would be absent in the no action alternative. Additionally, educational and interpretive programs developed along the extended trail would have long-term beneficial social impacts for residents and tourists.

Cumulative Impacts

The economies of states and local communities along the proposed trail extension have continually grown since the time of Lewis and Clark. Currently, these economies continue to show positive growth rates, but they tend to be lower than the national average. It is projected that these economies will continue to grow in the future.

As a result of the action alternative, trail development, including trail retracement and incremental promotion of visitor centers and museums, could result in increased visitation along trail corridors. The increase in the number of visitors to the area would not be expected to be substantial, but these visitors would result in greater visitor spending, which would create small but beneficial ripple effects in the local economy. As a whole, trail designation would have a negligible impact on the regional economy, although there may be measurable localized impacts.



CHAPTER 8: CONSULTATION AND COORDINATION

Public Involvement

The NPS has engaged interested and affected individuals, organizations, public agencies, and American Indian tribes in an ongoing manner for the purpose of effectively and responsibly accomplishing this study.

The scoping period of the Eastern Legacy study was October 19, 2010 through December 31, 2010. The NPS held nine public meetings during the scoping period to solicit comments from interested parties, and has continued to accept input throughout the process.

The NPS held public scoping meetings in 2010 at the following locations:

November 1, 2010

The National Quilt Museum
215 Jefferson St.
Paducah, KY 42001

November 3, 2010

Falls of the Ohio State Park Interpretive Center
201 West Riverside Dr.
Clarksville, IN 47129

November 3, 2010

Locust Grove
561 Blankenbaker Lane
Louisville, KY 40207

November 4, 2010

Campus Martius Museum
601 Second St.
Marietta, OH 45750

November 6, 2010

Cumberland Gap National Historic Park
PO Box 1848
Middlesboro, KY 40965

December 6, 2010

Elizabeth Senior Citizens Center
206 3rd St.
Elizabeth, PA 15037

December 5, 2010

Independence National Historic Park
One North Independence Mall West (6th St.)
Philadelphia, PA 19106

December 8, 2010

Sumner School Museum and Archives
1201 17th Street, N.W.
Washington, DC 20005

December 9, 2010

Lewis & Clark Exploratory Center
Charlottesville, VA 22911

Additional information about the initial scoping meetings, including early documents related to the study, can be found at: <http://parkplanning.nps.gov/eastern-legacy-srs>

Agency Consultation

Consultation with the appropriate federal, state, and local agencies has been conducted during this study and would be ongoing if the trail extension is designated. Interested members of the public, government agencies, and American Indian tribes were notified of the study and were invited to participate in the planning process by providing any input, information, and comments they had about the significance, feasibility, and desirability related to the extension study of the Lewis and Clark National Historic Trail.

The planning team consulted with various trail experts throughout the development of this study to obtain additional information about the history and location of sites and segments along the proposed routes, as well as best practices for research. Appropriate agencies and associated American Indian tribes will have continued opportunities to formally comment and consult on the draft study when it is released to the public.

US Fish and Wildlife Service

The NPS sent letters to the US Fish and Wildlife Service (Fish and Wildlife Service) ecological service offices in Illinois, Indiana, Kentucky, Missouri, Ohio, Pennsylvania, and West Virginia seeking informal consultation under section 7(a)(2) of the Endangered Species Act of 1973, as amended, and 50 CFR 402. The NPS determined federally listed species throughout the proposed trail corridor and requested Fish and Wildlife Service to notify the NPS of any changes or modifications to the threatened or endangered species lists used in preparation of this study and of any other species of concern that may be found in the study area.

The NPS received responses from the Illinois, Kentucky, Ohio, and Pennsylvania ecological service offices. The Illinois office emailed the NPS on July 30, 2015 regarding the use of the Information for Planning and Conservation (IPaC) system to determine the official species lists. IPaC determined the project could potentially impact 77 resources managed or regulated by the Fish and Wildlife Service throughout the jurisdiction of eight Fish and Wildlife Service ecological offices.

The NPS believes that should Congress designate this corridor for the Lewis and Clark National Historic Trail extension, that designation would not affect a listed species or result in the destruction or adverse modification of designated critical habitat. Designation by Congress would not result in the immediate development of physical trails or other visitor amenities. Those trails and amenities may be developed as funds become available to administer the trail, and would be subject to a separate compliance process, including consultation under section 7 of the Endangered Species Act. No additional consultation or technical assistance with the Fish and Wildlife Service is needed for the Lewis and Clark Eastern Legacy Trail Extension/Environmental Assessment project.

State Historic Preservation Offices

In accordance with section 106 of the NHPA, as amended, the NPS initiated consultation with the SHPOs in Delaware, Illinois, Indiana, Kentucky, Maryland, Missouri, Ohio, Pennsylvania, Tennessee, and West Virginia. The SHPOs were initially contacted in 2010 via letter that included the study newsletter and were informed of the study. When the draft study is released, a formal letter will be sent to the Illinois, Indiana, Kentucky, Missouri, Ohio, Pennsylvania, and West Virginia SHPOs with a request for concurrence with the study's findings relevant to the section 106 finding of no adverse effect. The draft study will also be sent to the Advisory Council for their review and comment.

Delaware

Timothy A. Slavin, SHPO
Division of Historical and Cultural Affairs
21 The Green
Dover, Delaware 19901

District of Columbia

David Maloney, SHPO
Historic Preservation Office
1100 4th Street, SW, Suite E650
Washington, D.C. 20024

Illinois

Heidi Brown-McCreery, Director, SHPO
Illinois Historic Preservation Agency
313 South Sixth St.
Springfield, IL 62701

Indiana

Cameron F. Clark, SHPO
Director, Department of Natural Resources
402 West Washington St.
Indiana Government Center South
Room W256
Indianapolis, IN 46204

Kentucky

Craig Potts, SHPO and Executive Director
Kentucky Heritage Council
300 Washington St.
Frankfort, KY 40601

Maryland

Elizabeth Hughes, SHPO
 Maryland Historical Trust
 100 Community Place
 3rd Floor
 Crownsville, Maryland 21032-2023

Missouri

Sara Parker Pauley, SHPO
 State Department of Natural Resources
 PO Box 176, Jefferson City, MO 65102

Ohio

Burt Logan, SHPO
 Ohio History Connection
 State Historic Preservation Office
 800 E. 17th Ave.
 Columbus, OH 43211-2474

Pennsylvania

James Vaughan, SHPO
 Bureau for Historic Preservation
 Commonwealth Keystone Building
 2nd Floor
 400 North St.
 Harrisburg, PA 17120-0093

Tennessee

Patrick McIntyre, Jr., Executive Director, SHPO
 Tennessee Historical Commission
 2941 Lebanon Road
 Nashville, Tennessee 37243-0442

Virginia

Julie Langan, SHPO
 Department of Historic Resources
 2801 Kensington Avenue
 Richmond, Virginia 23221

West Virginia

Randall Reid-Smith, SHPO
 West Virginia Division of Culture & History
 Historic Preservation Office
 1900 Kanawha Blvd. East
 Charleston, WV 25305-0300

Advisory Council on Historic Preservation
 Attn: Katry Harris
 401 F Street NW, Suite 308
 Washington, DC 20001-2637

American Indian Tribal Governments

The NPS will complete consultation with American Indian tribal governments who may be impacted by or interested in the study. The NPS will send the study to the list of tribes identified below. The federally recognized tribes listed below were either initially contacted or will be contacted as the study is released.

Cherokee (Tennessee, Georgia, Alabama, North Carolina, Virginia, Kentucky, West Virginia)

Cherokee Nation

Bill John Baker (Principal Chief)
 Tel: (918) 453-5000
 Fax: (918) 458-5580
 PO Box 948
 Tahlequah, OK 74465-0948
<http://www.cherokee.org>

Eastern Band of Cherokee Indians

Patrick Lambert (Principal Chief)
 Tel: (828) 497-7002
 Fax: (828) 497-7016
 PO Box 455
 Cherokee, NC 28719-0455
<http://www.nc-cherokee.com>

United Keetoowah Band of Cherokee Indians in Oklahoma

George Wickliffe (Chief)
 Tel: (918) 431-1818
 Fax: (918) 431-1873
 PO Box 746
 Tahlequah, OK 74465-0746

Chickasaw (Mississippi, Alabama, Tennessee, Arkansas, Kentucky, Missouri)

The Chickasaw Nation

Bill Anoatubby (Governor)

Tel: (580) 436-7280

Fax: (580) 436-4287

PO Box 1548

Ada, OK 74821-1548

<http://www.chickasaw.net>

Choctaw (Mississippi, Alabama, Georgia, Florida, Louisiana)

The Choctaw Nation of Oklahoma

Gary Batton (Chief)

Tel: (580) 924-8280

Fax: (580) 924-1150

PO Box 1210

Durant, OK 74702-1210

<http://www.choctawnation.com>

Mississippi Band of Choctaw Indians

Phyliss J. Anderson (Chief)

Tel: (601) 656-1501 (ext. 650)

Fax: (601) 650-7496

PO Box 6090

Choctaw, MS 39350-6090

<http://www.choctaw.org>

Creek (Mississippi, Alabama, Georgia, North Carolina, South Carolina)

The Muscogee (Creek) Nation

George Tiger (Principal Chief)

Tel: (918) 732-7601

Fax: (918) 758-1434

PO Box 580

Okmulgee, OK 74447-0580

<http://www.muscogeenation-nsn.gov>

Poarch Band of Creeks Indians

Stephanie A. Bryan (Tribal Chair)

Tel: (251) 368-9136 (ext. 2202 for Chairperson's Office)

Fax: (251) 368-1026

5811 Jack Springs Rd.

Atmore, AL 36502-5025

<http://www.poarchcreekindians.org>

Delaware (migrated to Ohio and Indiana)

Delaware Nation, Oklahoma

Kerry Holton (President)

Tel: (405) 247-2448 (ext. 1101 for President's Office)

Fax: (405) 247-9393

PO Box 825

Anadarko, OK 73005-0825

<http://www.delawarenation.com>

Delaware Tribe of Indians

Chester "Chet" Brooks (Chief)

Tel: (918) 337-6590

Fax: (918) 337-6591

OKLAHOMA HEADQUARTERS:

5100 Tuxedo Blvd.

Bartlesville, OK 74006-2746

KANSAS HEADQUARTERS:

601 High St.

Caney, KS 67333

<http://www.delawaretribe.org>

Iroquois (migrated to Ohio and Indiana)
(likely ancestors of the current Seneca-
Cayuga Tribe in Oklahoma, and possibly
the Seneca Tribe in New York)

Cayuga Nation

Clint Halftown (Federal Representative)

Tel: (315) 568-0750

Fax: (315) 568-0752

PO Box 803 Seneca Falls, NY 13148

-OR-

2540 SR-89 Seneca Falls, NY 13148

<http://www.cayuganation-nsn.gov>

Oneida Nation of New York

Ray Halbritter (Nation Representative)

Tel: (315) 829-8900

Fax: (315) 829-8958

2037 Dreamcatcher Plaza

Oneida, NY 13421

<http://www.oneidaindiannation.com>

Oneida Nation

Cristina Danforth (Chairwoman)

Tel: (920) 869-4354

Fax: (920) 869-4040

PO Box 365

Oneida, WI 54155-0365

<http://www.oneida-nsn.gov>

Onondaga Nation

Irving Powless, Jr. (Chief)

Tel: (315) 492-1922

Fax: (315) 469-4717

3951 Route 11

Nedrow, NY 13120

<http://www.onondaganation.org>

Seneca Nation of Indians

Maurice A. John, Sr. (President)

Tel: (716) 945-1790

Fax: (716) 945-1565

ALLEGANY:

90 Ohiyo Way

Salamanca, NY 14779-0231

CATTARAUGUS:

12837 Route 438

Irving, NY 14081

<http://www.sni.org>

Seneca-Cayuga Nation

William L. Fisher (Chief)

Tel: (918) 787-5452 (ext. 300 for Chief)

Fax: (918) 787-5521

23701 S. 655 Rd.

Grove, OK 74344-6317

<http://www.sctribe.com>

Saint Regis Mohawk Tribe

Beverly Cook (Chief), Ron LaFrance Jr. (Chief),

Eric Thompson (Tribal Chief)

Tel: (518) 358-2272

Fax: (518) 358-3203

412 State Route 37

Akwesasne, NY 13655-3109

<http://www.srmt-nsn.gov>

Tonawanda Band of Seneca

Darwin Hill (Chief)

Tel: (716) 642-4244

Fax: (716) 642-4008

7027 Meadville Rd.

Basom, NY 14013-9749

Tuscarora Nation

Leo Henry (Chief)

Tel: (716) 601-4737

Fax: (880) 990-3310

2006 Mt. Hope Rd.

Lewiston, NY 14092

Kickapoo (Ohio, Indiana, Illinois) (central Algonquian group, forming a division with the Sauk and Foxes, with whom they have close ethnic and linguistic connection) (The relation of this division is rather with the Miami, Shawnee, Menominee, and Peoria than with the Chippewa, Potawatomi, and Ottawa.)

Kickapoo Traditional Tribe of Texas

Juan Garza, Jr. (Chairperson)

Tel: (830) 773-2105

Fax: (830) 757-9228

HC 1 Box 9700

Eagle Pass, TX 78852-9752

<http://www.texasindians.com>

Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas

Lester Randall (Chairperson)

Tel: (785) 486-2131

Fax: (785) 486-2801

1107 Goldfinch Rd.

Horton, KS 66439-9537

<http://www.ktik-nsn.gov>

Kickapoo Tribe of Oklahoma

David Pacheco Jr. (Chairperson)

Tel: (405) 964-7052

Fax: (405) 964-7065

PO Box 70

McCloud, OK 74851-0070

<http://www.kickapootribeofoklahoma.com>

Miami (Indiana, Ohio, Illinois) (Wea and Piankishaw are also connected with the Miami)

Miami Tribe of Oklahoma

Douglas G. Lankford (Chief)

Tel: (918) 542-1445

Fax: (918) 542-7260

PO Box 1326

Miami, OK 74355-1326

<http://www.miamination.com>

Osage (migrated from Ohio River valley in Kentucky to Arkansas, Missouri, Kansas, and Oklahoma)

The Osage Nation

Geoffrey Standingbear (Principal Chief)

Tel: (918) 287-5555

Fax: (918) 287-5562

627 Grandview Ave.

Pawhuska, OK 74056-4201

Ottawa

Grand Traverse Band of Ottawa and Chippewa Indians, Michigan

Al Pedwaydon (Chairman)

Tel: (231) 534-7129

Fax: (231) 534-7568

2605 N. West Bay Shore Dr.

Peshawbestown, MI 49682

<http://www.gtbindians.org>

Little River Band of Ottawa Indians, Michigan

Larry Romanelli (Ogema)

Tel: (231) 723-8288

Fax: (231) 723-3270

2608 Government Center Dr.

Manistee, MI 49660

<http://www.lrboi-nsn.gov>

Ottawa Tribe of Oklahoma

Ethel E. Cook (Chief)

Tel: (918) 540-1536

Fax: (918) 542-3214

PO Box 110

Miami, OK 74355

<http://www.ottawatribes.org>

Peoria (Confederation of Kaskaskia, Peoria, Piankeshaw and Wea plus Illini Confederation) (Illini Confederation consisted of several Native American tribes in the upper Mississippi River valley of North America. The tribes were the Kaskaskia, Cahokia, Peoria, Tamaroa, Moingwena, Michigamea, Albiui, Amonokoa, Chepoussa, Chinkoa, *Coiracoentanon*, Espeminkia, Maroa, Matchinkoa, Michibousa, Negawichi, and Tapouara.)

Peoria Tribe of Indians of Oklahoma

John Froman (Chief)
Tel: (918) 540-4155
Fax: (918) 540-2538
PO Box 1527
Miami, OK 74355-1527
<http://www.peoriatribe.com>

Potawatomi (Indiana, Illinois, Ohio)

Citizen Potawatomi Nation, Oklahoma

John Barrett, Jr. (Chairperson)
Tel: (405) 275-3121
Fax: (405) 275-0198
1601 Gordon Cooper Dr.
Shawnee, OK 74801-9002
<http://www.potawatomi.org>

Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan

David Sprague (Chairperson)
Tel: (616) 681-8830
Fax: (616) 681-8836
PO Box 218
Dorr, MI 49323-0218
<http://www.mbpi.org>

Pokagon Band of Potawatomi Indians, Michigan and Indiana

John Warren (Chairperson)
Tel: (800) 517-0777 or (269) 782-6323
Fax: (269) 782-9625
58620 Sink Rd.
PO Box 180
Dowagiac, MI 49047-9329
<http://www.mbpi.org>

Prairie Band Potawatomi Nation

Lianna Onnen (Chairperson)
Tel: (785) 966-4000 or (877) 715-6789
Fax: (785) 966-4009
16281 Q Rd.
Mayetta, KS 66509-8970

Quapaw (Arkansas)

The Quapaw Tribe of Indians

John Berrey (Chairperson)
Tel: (918) 542-1853
Fax: (918) 542-4694
5681 South 630 Rd. Quapaw, OK 74363
-OR-
PO Box 765 Quapaw, OK 74363-0765
<http://www.quapawtribe.com>

Sac & Fox (Illinois and northeast Missouri)

Sac & Fox Tribe of the Mississippi in Iowa

Judith Bender (Chairperson)
Tel: (641) 484-4678
Fax: (641) 484-5424
349 Meskwaki Rd.
Tama, IA 52339-9634
<http://www.meskwaki.org>

Sac & Fox Nation of Missouri in Kansas and Nebraska

Edmore Green (Chairperson)

Tel: (785) 742-0053 (ext. 23)

Fax: (785) 742-7146

Recognition Status: Federal

305 N. Main St.

Reserve, KS 66434-8122

<http://www.sacandfoxks.com>**Sac & Fox Nation, Oklahoma**

George Thurman (Principal Chief)

Tel: (918) 968-3526

Fax: (918) 968-4211

920883 S. Highway 99

Stroud, OK74079-5178

<http://www.sacandfoxnation-nsn.gov>**Shawnee** (Ohio, Indiana, Kentucky, West Virginia, Virginia)**Eastern Shawnee Tribe of Oklahoma**

Glenna Wallace (Chief)

Tel: (918) 666-2435

Fax: (888) 971-3905

12755 S. 705 Rd.

Wyandotte, OK 74370-3148

<http://www.estoo-nsn.gov>**Absentee-Shawnee Tribe of Indians of Oklahoma**

Edwina Butler-Wolfe (Governor)

Tel: (405) 275-4030 (ext. 6308)

Fax: (405) 273-7938

2025 Gordon Cooper Dr.

Shawnee, OK 74801-9005

<http://www.astribe.com>**Shawnee Tribe**

Ron Sparkman (Chief)

Tel: (918) 542-2441

Fax: (918) 542-2922

PO Box 189

29 S. Hwy 69A

Miami, OK 74355-0189

<http://www.shawnee-tribe.com>**Wyandotte** (Confederation of Huron and other tribes) (pushed into Michigan, Ohio, and Indiana)**Wyandotte Nation**

Billy Friend (Chief)

Tel: (918) 678-2297 (ext. 6318)

Fax: (918) 678-2944

64700 E. Highway 60

Wyandotte, OK 74370-2098

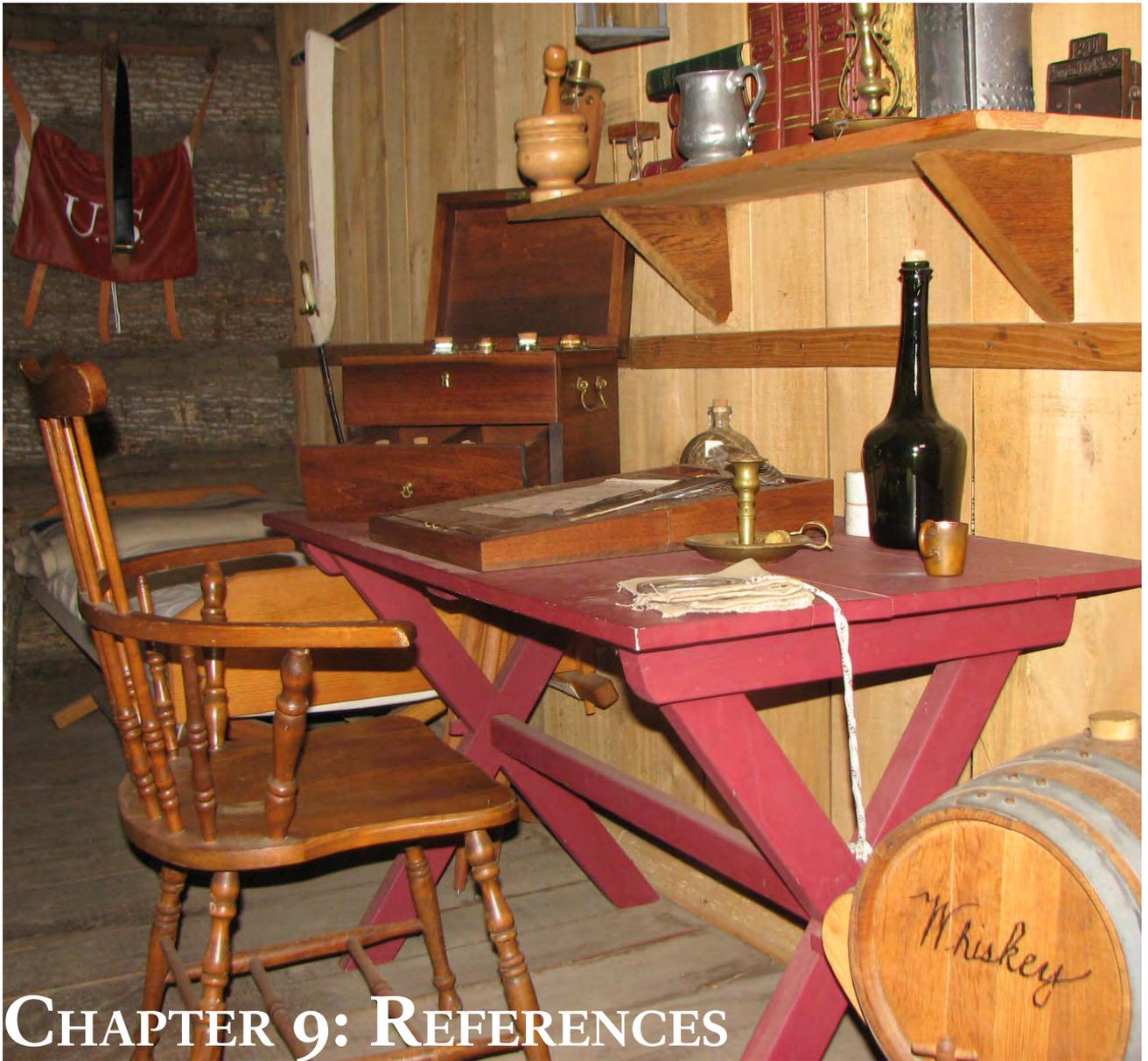
<http://www.wyandotte-nation.org>

Coordination

In preparing this study, the NPS coordinated with many groups to inform them of the study process. Many of these groups have been contacted multiple times and will be informed again when the study document is released.

National Park System Advisory Board

The significance statement was submitted to the National Park System Advisory Board's National Historic Landmarks Committee, which at its November 16, 2015 meeting, unanimously concurred with the findings and forwarded the nomination to the full Advisory Board. The Advisory Board, in turn, approved the nomination at its June 2016 meeting.



CHAPTER 9: REFERENCES

Please visit the study website for a complete list of works referenced for this study.
<http://parkplanning.nps.gov/eastern-legacy-srs>

This page intentionally left blank.



APPENDIXES

APPENDIX A. STATEMENT OF SIGNIFICANCE TO THE NATIONAL PARK SYSTEM ADVISORY BOARD; ADVISORY BOARD RECOMMENDATION

The final statement was not available as of the time of publication. The statement will be provided on the project website when it is available. <http://parkplanning.nps.gov/eastern-legacy-srs>

APPENDIX B. DATA TABLES FOR FEASIBILITY AND AFFECTED ENVIRONMENT CHAPTERS

B1. Recreation and Historic Resources along the Trail Corridor between Louisville, Kentucky and Cairo, Illinois on the Ohio River

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Kentucky Sites				
Ballard Wildlife Management Area	Ballard County, Kentucky	State	Kentucky Department of Fish and Wildlife Resources	
Ben Hawes City Park	Owensboro, Kentucky	City	Owensboro Parks and Recreation	
Chickasaw Park	Louisville, Kentucky	City	Louisville Parks Department	
Clyde F. Boyles Greenway Trail	Paducah, Kentucky	City	Paducah Parks Services Department	
Green River State Forest	Henderson County, Kentucky	State	Kentucky Department of Natural Resources	
Henderson Sloughs Wildlife Management Area	Henderson County, Kentucky	State	Kentucky Department of Fish and Wildlife Resources	
John James Audubon State Park	Henderson, Kentucky	State	Kentucky State Parks	
Louisville Loop	Louisville, Kentucky	City	City of Louisville	
National Quilt Museum	Paducah, Kentucky	Private	National Quilt Museum	
Otter Creek Outdoor Recreation Area	Meade County, Kentucky	State	Kentucky Department of Fish and Wildlife Resources	
Paducah Floodwall Murals	Paducah, Kentucky	City	City of Paducah	
Portland Wharf	Louisville, Kentucky	City	Louisville Parks Department	
River Discovery Center (Paducah)	Paducah, Kentucky	Private	River Discovery Center	
Shawnee Park	Louisville, Kentucky	City	Louisville Parks Department	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
The Henderson Riverwalk	Henderson, Kentucky	City	Henderson County Tourism Commission	
Wickliffe Mounds State Historic Site	Ballard County, Kentucky	State	Kentucky State Parks	
William Clark Market House Museum	Paducah, Kentucky	Private	William Clark Market House Museum	X
Indiana Sites				
American Discovery Trail	Multiple counties in southern Indiana along the Ohio River	Private	American Discovery Trail Society	
Angel Mounds State Historic Site	Evansville, Indiana	State	Indiana State Museum	
Brock-Sampson Nature Preserve	Floyd County, Indiana	State	Indiana Department of Natural Resources	
Culbertson Mansion State Historic Site	New Albany, Indiana	State	Indiana State Museum	
Evansville Museum of Arts, History and Science	Evansville, Indiana	Private	Evansville Museum of Arts, History and Science	
Harrison-Crawford State Forest	Harrison and Crawford Counties, Indiana	State	Indiana Department of Natural Resources	
Hoosier National Forest	Brown, Crawford, Dubois, Jackson, Lawrence, Martin, Monroe, Orange, and Perry Counties	Federal	US Forest Service	
Hovey Lake Fish and Wildlife Area	Posey County, Indiana	State	Indiana Department of Natural Resources	
Marengo Cave	Marengo, Indiana	Private	Marengo Cave	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
O'Bannon Woods State Park	Harrison County, Indiana	State	Indiana Department of Natural Resources	
Ohio River Greenway	New Albany, Clarksville, Indiana, near the Falls of the Ohio, and Jeffersonville, Indiana	City and Federal	The Ohio River Greenway Development Commission and the US Army Corps of Engineers	
Pagoda Visitors Center	Evansville, Indiana	City	Evansville Convention and Visitors Bureau	
Squire Boone Caverns	Mauckport, Indiana	Private	Squire Boone Caverns and Village	
Twin Swamps Nature Preserve	Posey County, Indiana	State	Indiana Department of Natural Resources	
Wyandotte Caves State Recreation Area	Harrison County, Indiana	State	Indiana Department of Natural Resources	
Illinois Sites				
A.B. Safford Memorial Library	Cairo, Illinois	City	City of Cairo	X
Cairo Customs House Museum	Cairo, Illinois	City	City of Cairo/Custom House Restoration Commission	
Cave-In-Rock State Park	Cave-In-Rock, Illinois	State	Illinois Department of Natural Resources	
Chestnut Hills State Nature Preserve	Pulaski County, Illinois	State	Illinois Department of Natural Resources	
Dog Island Wildlife Management Area	Pope County, Illinois	State	Illinois Department of Natural Resources	
Fort Massac State Park	Metropolis, Illinois	State	Illinois Department of Natural Resources	X
Golconda Marina State Recreation Area	Golconda, Illinois	State	Illinois Department of Natural Resources	
Horseshoe Lake State Fish and Wildlife Area	Alexander County, Illinois	State	Illinois Department of Natural Resources	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Kinkaid Mounds State Historic Site	Massac County, Illinois	State/Private	Illinois Historic Preservation Agency/ Kinkaid Mounds Support Organization	
Mermet Lake State Fish and Wildlife Area	Massac County, Illinois	State	Illinois Department of Natural Resources	
Mound City National Cemetery	Mound City, Illinois	Federal	National Cemetery Administration	
Murals of Metropolis	Metropolis, Illinois	City	City of Metropolis	X
Ohio River National Scenic Byway	Multiple counties in Illinois and Indiana	Federal	Federal Highway Administration	
River Walk	Rosiclare, Illinois	City	City of Rosiclare	
Shawnee National Forest	Multiple counties, Illinois	Federal	US Forest Service	
Shawneetown Bank State Historic Site	Old Shawneetown, Illinois	State	Illinois Historic Preservation Agency	
St. Mary's Park	Cairo, Illinois	City	City of Cairo	
Tower Rock Recreation Area	Hardin County, Illinois	Federal	US Forest Service	

B2. Recreation and Historic Resources along the Trail Corridor between Cairo, Illinois and Wood River, Illinois on the Mississippi River

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Illinois Sites				
Alton Marina and Riverfront Park	Alton, Illinois	Private	Parrot Pointe Marine, Inc.	
Bellefontaine House	Waterloo, Illinois	County	Monroe County Historical Society	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Boy Scout Lake, LaVista Park, Missouri Expansion, Palisades, Piasa Creek Watershed, Piasa Harbor, Riverview House, Rocky Fork Underground Railroad	St. Louis metropolitan area, Missouri and Illinois	Private	Great Rivers Land Trust	
Buttermilk Hill Day Use Area	Jackson County, Illinois	Federal	US Forest Service	
Cahokia Courthouse State Historic Site	Cahokia, Illinois	State	Illinois Historic Preservation Agency	X
Cahokia Mounds State Historic Site	Cahokia, Illinois	State	Illinois Historic Preservation Agency	X
Clark Bridge	Links Alton, Illinois to St. Louis metropolitan area, Missouri	State	Illinois Department of Transportation	X
Creole House	Prairie du Rocher, Illinois	County	Randolph County Historical Society	
Cypress Creek National Wildlife Refuge	Alexander and Pulaski Counties, Illinois	Federal	US Fish and Wildlife Service	
Fort De Chartres State Historic Site	Prairie du Rocher, Illinois	State	Illinois Historic Preservation Agency	
Fort Kaskaskia State Historic Site	Ellis Grove, Illinois	State	Illinois Historic Preservation Agency	X
French Colonial District	Kaskaskia-Fort De Chartres-Cahokia, Illinois	Private/State	Mostly privately owned but coordinated by the Illinois Department of Natural Resources	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Governor Bond State Memorial	Chester, Illinois	State	Illinois Historic Preservation Agency	
Great River Road National Scenic Byway (Mississippi River)	Extends the entire length of the Mississippi River	Federal	Federal Highway Administration	
Great Rivers National Scenic Byway	Traverses the entire Mississippi River	Federal	Federal Highway Administration	
Holy Family Catholic Church	Cahokia, Illinois	Private	Church of the Holy Family	
Horseshoe Lake State Park	Madison County, Illinois	State	Illinois Department of Natural Resources	
Jarrot Mansion, Cahokia, Illinois	Cahokia, Illinois	State	Illinois Historic Preservation Agency	X
Kaskaskia Bell State Historic Site	Kaskaskia, Illinois	State	Illinois Historic Preservation Agency	
Kinkaid Lake Trail System	Jackson County, Illinois	Federal	US Forest Service	
LaRue Pine-Hills Research Natural Area	Union County, Illinois	Federal	US Forest Service	X
Lewis and Clark Confluence Tower	Hartford, Illinois	City	Village of Hartford	X
Lewis and Clark State Historic Site (Camp River Dubois/ Wood River)	Hartford, Illinois	State	Illinois Historic Preservation Agency	X
Little Murphysboro State Park	Jackson County, Illinois	State	Illinois Department of Natural Resources	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Madison County Transit Trails	Madison County, Illinois	County	Madison County Transit	
Martin-Boismenu House State Historic Site (Prairie Depot, Illinois)	St. Clair County, Illinois	State	Illinois Historic Preservation Agency	
Middle Mississippi River National Wildlife Refuge	Jackson County, Illinois	Federal	US Fish and Wildlife Service	
Mill Creek Natural Area	Randolph County, Illinois	Private	CLIFFTOP - Conserving Lands In Farm, Forest, Talus Or Prairie and HeartLands Conservancy	
National Great Rivers Museum	Alton, Illinois	Federal	US Army Corps of Engineers	
National Great Rivers Research and Education Center	East Alton, Illinois	Public	Illinois Natural History Survey, University of Illinois at Urbana-Champaign; Lewis and Clark Community College	
Nature Trails on the Byway	Alton, Illinois	City	City of Alton	
Pierre Menard Home State Historic Site	Ellis Grove, Illinois	State	Illinois Historic Preservation Agency	
Russell Commons Park	Alton, Illinois	City	City of Alton	
Sacagawea Statue	Godfrey, Illinois	State	Lewis and Clark Community College	X
Salt Lick Point Land and Water Reserve and Trails	Valmeyer, Illinois	City	Village of Valmeyer	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Stemler Cave Woods Nature Preserve	St. Clair County, Illinois	State	Illinois Department of Natural Resources	
Trail of Tears State Forest	Union County, Illinois	State	Illinois Department of Natural Resources	
Turkey Bluffs State Fish and Wildlife Area	Randolph County, Illinois	State	Illinois Department of Natural Resources	
Union County State Fish and Wildlife Area	Union County, Illinois	State	Illinois Department of Natural Resources	
White Rock Nature Preserve	Monroe County, Illinois	Private	CLIFFTOP - Conserving Lands In Farm, Forest, Talus Or Prairie and HeartLands Conservancy	
Missouri Sites				
Apple Creek Conservation Area	Cape Girardeau County, Missouri	State	Missouri Department of Conservation	
Bellefontaine Cemetery	St. Louis, Missouri	Private	Bellefontaine Cemetery	X
Bellerive Park	St. Louis, Missouri	City	St. Louis Department of Parks, Recreation, and Forestry	
Bolduc House Museum	Ste. Genevieve, Missouri	Private	The National Society of the Colonial Dames of America	
Campbell House Museum	St. Louis, Missouri	Private	Campbell House Foundation, Inc.	
Cape Girardeau Conservation Nature Center	Cape Girardeau, Missouri	State	Missouri Department of Conservation	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Cape LaCroix Recreation Trail	Cape Girardeau, Missouri	City	Cape Girardeau Department of Parks and Recreation	
Cape River Heritage Museum	Cape Girardeau, Missouri	Private	Cape River Heritage Museum	
Cape Rock Park and Scenic Overlook	Cape Girardeau, Missouri	City	Cape Girardeau Department of Parks and Recreation	
Columbia Bottom Conservation Area	St. Louis County, Missouri	State	Missouri Department of Conservation	
Edward "Ted" Pat Jones Confluence Point State Park	St. Charles County, Missouri	State	Missouri Department of Natural Resources	
Governor Daniel Dunklin's Grave State Historic Site	Jefferson County, Missouri	State	Missouri Department of Natural Resources	
Guibourd-Vallé House	Ste. Genevieve, Missouri	Private	The Foundation for the Restoration of Ste. Genevieve	
Henry S. Whipple Park	Charleston, Missouri	City	City of Charleston	X
Historic Ste. Genevieve (National Historic Landmark District)	Ste. Genevieve, Missouri	Mostly Private		
Jefferson Barracks County Park	St. Louis, Missouri	County	Missouri County Department of Parks and Recreation	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Jefferson National Expansion Memorial and Museum of Westward Expansion	St. Louis, Missouri	Federal	NPS	X
Magnolia Hollow Conservation Area	Ste. Genevieve County, Missouri	State	Missouri Department of Conservation	
Mastodon State Historic Site	Imperial, Missouri	State	Missouri Department of Natural Resources	
McKinley Bridge Bikeway	St. Louis, Missouri and Madison County, Illinois	City/County	Great Rivers Greenway District	
Mississippi River Water Trail	Saverton, Missouri to St. Louis, Missouri	Private (with federal, state, and local partnership)	American Canoe Association	
Missouri History Museum/ Missouri Historical Society	St. Louis, Missouri	Private/City	Missouri Historical Society/ Metropolitan Zoological and Museum District	X
Modoc River Ferry	Ste. Genevieve, Missouri	Private	New Bourbon Regional Port Authority	
Pere Marquette Park	Ste. Genevieve, Missouri	City	City of Ste. Genevieve	
Red House Interpretive Center	Cape Girardeau, Missouri	City	City of Cape Girardeau Advisory Boards and Commissions	X
Seventy-Six Conservation Area	Perry County, Missouri	State	Missouri Department of Conservation	
St. Louis Riverfront Trail	St. Louis, Missouri	City/County	Great Rivers Greenway District	
Ste. Genevieve Welcome Center	Ste. Genevieve, Missouri	City	City of Ste. Genevieve	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
The Captains Return Statue	St. Louis, Missouri	City	City of St. Louis	X
Tower Rock Natural Area	Perry County, Missouri	State	Missouri Department of Conservation	
Trail of Tears National Historic Trail	Georgia, Alabama, Mississippi, Arkansas, Tennessee, Kentucky, Illinois, Missouri, and Oklahoma	Federal	NPS	
Trail of Tears State Park	Cape Girardeau County, Missouri	State	Missouri Department of Natural Resources	
Ulysses S. Grant National Historic Site	St. Louis, Missouri	Federal	NPS	

B3. Recreation and Historic Resources along the Trail Corridor between Pittsburgh, Pennsylvania and Louisville, Kentucky along the Ohio River

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Pennsylvania Sites				
Allegheny Observatory	Pittsburgh, Pennsylvania	State	University of Pittsburgh	
Pittsburgh Citiparks	Pittsburgh, Pennsylvania	City	City of Pittsburgh Department of Parks and Recreation	
Ohio River Islands National Wildlife Refuge	Hookstown, Pennsylvania	Federal	United States Fish and Wildlife Service	
Ohio Sites				
Historic Fort Steuben	Steubenville, Ohio	Private	Old Fort Steuben Project, Inc.	X
The Museum of Ceramics	East Liverpool, Ohio	Private	Museum of Ceramics Foundation and Ohio History Connection	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Sunfish Creek State Forest	Monroe County, Ohio	State	Ohio Department of Natural Resources	
Wayne National Forest	Monroe, Washington, Noble, Gallia, Lawrence, and Scioto Counties	Federal	United States Forest Service	
Ohio River Museum	Marietta, Ohio	Private	Friends of the Museums and the Ohio History Connection	
Campus Martius Museum	Marietta, Ohio	Private	Friends of the Museums and the Ohio History Connection	
Forked Run State Park	Meigs County, Ohio	State	Ohio Department of Natural Resources	
Buffington Island Battlefield Memorial Park	Portland, Ohio	State	Ohio Historical Society	
Our House Tavern	Gallipolis, Ohio	State	The Friends of Our House Committee	
Shawnee State Park	Scioto County, Ohio	State	Ohio Department of Natural Resources	
John Rankin House	Ripley, Ohio	State	Ohio Historical Society	
Grant Birthplace	Point Pleasant, Ohio	State	Ohio Historical Society	
Stow House State Memorial	Cincinnati, Ohio	State	Ohio Historical Society	
Cincinnati Art Museum	Cincinnati, Ohio	State	The Cincinnati Art Museum	
William Howard Taft National Historic Site	Cincinnati, Ohio	Federal	NPS	

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
West Virginia Sites				
Tomlinson Run State Park	Hancock County, West Virginia	State	West Virginia Division of Natural Resources	
Oglebay Park	Wheeling, West Virginia	City	Wheeling Park Commission	
North Wheeling Historic District	Wheeling, West Virginia	N/A	N/A	
Grave Creek Mound Archeological Complex	Moundsville, West Virginia	State	West Virginia Division of Culture and History	
Fostoria Glass Museum	Moundsville, West Virginia	Private	Fostoria Glass Society of America	
Parkersburg Art Center	Parkersburg, West Virginia	Private	Parkersburg Woman's Club	
Oil & Gas Museum	Parkersburg, West Virginia	Private	Oil & Gas Museum	
Blennerhassett Island Historical State Park	Parkersburg, West Virginia	State	West Virginia Division of Natural Resources	
Kentucky Sites				
Wickliffe Mounds State Historic Site	Ballard County, Kentucky	State	Kentucky Department of Parks	
Fort Jefferson Memorial Cross Park	Ballard County, Kentucky	Private	Consortium of local churches	X
River Discovery Center	Paducah, Kentucky	Private	River Discovery Center	X
National Quilt Museum of the United States	Paducah, Kentucky	Private	National Quilt Museum	
William Clark Market House Museum	Paducah, Kentucky	Private	William Clark Market House Museum	X

Site Name	Location	Ownership	Administration	Lewis and Clark Connection
Land Between the Lakes National Recreation Area (Golden Pond Visitor Center)	Golden Pond, Kentucky	Federal	United States Forest Service	
Indiana Sites				
Lanier Mansion State Historic Site	Madison, Indiana	State	Indiana State Museum	
Clifty Falls State Park	Madison, Indiana	State	Indiana Department of Natural Resources	
Charlestown State Park	Charlestown, Indiana	State	Indiana Department of Natural Resources	
Big Oaks National Wildlife Refuge	Jennings, Ripley, and Jefferson Counties, Indiana	Federal	United States Fish and Wildlife Service	

B4. Sites Visited by the 2003–2006 Corps of Discovery II for the Bicentennial of the Lewis and Clark Expedition from 1803 to 1806

2003					
Location	Associated with Expedition?	Total Visits	Days Open	Visits per Day	Population of Location or Nearby Area
Monticello, Virginia	Yes, East	6,311	5	1,262/day	N/A
Lynchburg, Virginia	No	3,902	10	390/day	77,203
Washington, DC	Yes, East	7,868	21	375/day	632,323
Harpers Ferry, West Virginia	Yes, East	15,501	22	705/day	286
Huntingdon, Pennsylvania	No	15,203	11	1,382/day	7,093

2003					
Location	Associated with Expedition?	Total Visits	Days Open	Visits per Day	Population of Location or Nearby Area
Valley Forge, Pennsylvania	No	9,003	12	750/day	Unincorporated
Baltimore, Maryland	Yes, East	7,203	8	900/day	621,342
Montpelier, Virginia	No	4,281	9	476/day	N/A
Wheeling, West Virginia	Yes, East	4,207	9	468/day	153,172
Point Marion, Pennsylvania	Yes, East	3,665	8	458/day	1,333
Hannibal Dam, Ohio	Yes, East	1,422	5	285/day	Unincorporated
Huntington, West Virginia	Yes, East	2,922	6	487/day	365,419
Indianapolis, Indiana	No	2,696	12	225/day	829,718
Pittsburgh, Pennsylvania	Yes, East	16,147	16	1,009/day	2,661,369
Ashland, Kentucky	Yes, East	5,038	5	1,008/day	21,684
Rising Sun, Indiana	Yes, East	1,425	7	204/day	2,304
Maysville, Kentucky	Yes, East	2,248	6	375/day	9,011
Louisville, Kentucky	Yes, East	798	6	133/day	741,096
Clarksville, Indiana	Yes, East	9,482	6	1,580/day	268,546
Henderson, Kentucky	Yes, East	2,517	5	504/day	28,853
Paducah, Kentucky	Yes, East	2,098	6	350/day	25,135
Cairo, Illinois	Yes, both	437	5	88/day	2,759
Cape Girardeau, Missouri	Yes, both	744	5	149/day	37,941
Chester, Illinois	Yes, East	603	6	101/day	8,569

2004					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
St. Louis, Missouri	Yes, both	9,774	6	1,629/day	2,900,605
Cahokia, Illinois	Yes, East	6,003	5	1,200/day	16,391
Alton, Illinois	Yes, East	6,229	6	1,038/day	27,865
Rend Lake, Illinois	Yes, East	6,197	5	1,240/day	7,099
Springfield Missouri	No	24,481	9	2,720/day	160,660
Ste. Genevieve, Missouri	Yes, East	6,653	4	1,663/day	4,410
Hartford, Illinois	Yes, East	13,949	6	2,324/day	1,423
St. Charles, Missouri	Yes, West	12,639	4	3,159/day	66,598

2004					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
Jefferson City, Missouri	Yes, West	13,464	6	2,274/day	43,332
Boonville, Missouri	Yes, West	7,238	4	1,809/day	8,346
Fort Osage, Missouri	Yes, West	7,633	5	1,526/day	N/A
Key Point, Kansas	Yes, West	13,743	9	1,527/day	500,000
St. Joseph, Missouri	Yes, West	10,669	4	2,667/day	77,185
Nebraska City, Nebraska	Yes, West	6,155	3	2,052/day	7,315
Omaha, Nebraska	Yes, West	14,568	4	3,642/day	415,068
Blair, Nebraska	Yes, West	6,673	5	1,335/day	8,013
Macy, Nebraska	Yes, West	2,999	4	750/day	5,194
Sioux City, Iowa	Yes, West	9,008	6	1,501/day	82,967
Chamberlain, South Dakota	Yes, West	6,370	5	1,274/day	2,400
Eagle Butte, South Dakota	Yes, West	2,538	7	363/day	1,318
Fort Pierre, South Dakota	Yes, West	13,182	16	824/day	13,860
Stanton, North Dakota	Yes, West	8,218	5	1,644/day	367
Bismarck, North Dakota	Yes, West	22,655	10	2,266/day	62,665

2005					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
Tempe, Arizona	No	4,621	7	660/day	164,268
Tucson, Arizona	No	13,801	9	1,534/day	525,796
Albuquerque, New Mexico	No	11,617	9	1,291/day	552,804
San Antonio, Texas	No	10,540	9	1,171/day	1,300,000
Oklahoma City, Oklahoma	No	8,494	5	1,699/day	591,967
Hazen, North Dakota	Yes, West	5,545	7	792/day	2,417
Watford City, North Dakota	Yes, West	10,044	7	1,435/day	1,923
Williston, North Dakota	Yes, West	10,630	9	1,181/day	16,006
Poplar, Montana	Yes, West	3,099	4	775/day	10,321

2005					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
Glasgow, Montana	Yes, West	6,923	4	1,731/day	3,301
Fort Benton, Montana	Yes, West	7,540	10	754/day	1,460
Box Elder, Montana	Yes, West	2,407	4	602/day	3,500
Great Falls, Montana	Yes, West	15,012	10	1,501/day	58,950
Helena, Montana	Yes, West	17,745	9	1,972/day	28,592
Bozeman, Montana	Yes, West	8,091	10	809/day	38,025
Dillon, Montana	Yes, West	6,243	4	1,561/day	4,113
Salmon, Idaho	Yes, West	6,768	10	677/day	3,124
Hamilton, Montana	Yes, West	8,721	4	2,180/day	4,374
Lolo, Montana	Yes, West	6,894	4	1,724/day	3,892
Kamiah, Idaho	Yes, West	14,841	11	1,347/day	3,499
Clarkston, Washington	Yes, West	12,447	9	1,383/day	7,331
Tri-Cities, Washington	Yes, West	12,191	4	3,048/day	253,340
Pendleton, Oregon	Yes, West	4,724	4	1,181/day	16,784
The Dalles, Oregon	Yes, West	9,852	4	2,463/day	13,631
Long Beach, Washington	Yes, West	16,693	9	1,855/day	1,393
Seaside, Oregon	Yes, West	9,182	4	2,296/day	6,476
Vancouver, Washington	Yes, West	28,852	14	2,061/day	164,759

2006					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
St. Helens, Oregon	Yes, West	11,375	8	1,422/day	12,905
Grand Ronde, Oregon	Yes, West	11,798	9	1,311/day	55
Stevenson, Washington	Yes, West	6,310	4	1,578/day	1,473
Toppenish, Washington	Yes, West	5,899	4	1,475/day	31,799
Warm Springs, Washington	Yes, West	8,251	4	2,063/day	3,314
Pendleton, Oregon	Yes, West	7,195	9	800/day	16,784
Dayton, Washington	Yes, West	5,918	4	1,480/day	2,509
Boise, Idaho	No	24,448	10	2,445/day	210,145
Lewiston, Idaho	Yes, West	15,010	13	1,155/day	32,119
Missoula, Montana	Yes, West	4,529	4	1,132/day	67,290
Lincoln, Montana	Yes, West	4,131	3	1,377/day	1,100
Browning, Montana	Yes, West	1,802	4	451/day	1,026

2006					
Location	Associated with Expedition	Total Visits	Days Open	Average	Population of Location or Nearby Area
Crow Agency, Montana	Yes, West	2,653	4	663/day	1,616
Billings, Montana	Yes, West	8,792	4	2,198/day	105,636
Miles City, Montana	Yes, West	5,753	5	1,151/day	8,438
Sidney, Montana	Yes, West	4,095	5	819/day	5,436
New Town, North Dakota	Yes, West	6,052	4	1,513/day	2,040
Washburn, North Dakota	Yes, West	1,851	4	463/day	1,261
Ponca State Park, Nebraska	Yes, West	3,277	4	819/day	N/A
Atchison, Kansas	Yes, West	7,032	4	1,758/day	11,021
St. Louis, Missouri	Yes, East	2,188	3	729/day	2,900,605

B5. Below is a list of the primary Western Expedition tourist sites related to the Lewis and Clark National Historic Trail. A total of 122 sites are located throughout the western portion. This includes areas of Idaho, Illinois, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, Oregon, South Dakota, and Washington.

Those sites that are underlined represent NPS sites.

Idaho

- Sacajawea Interpretive Cultural and Education Center (Salmon)
- Lemhi County Historical Museum (Salmon)
- Nez Perce County Historical Museum (Lewiston)
- Historical Museum at St. Gertrude (Cottonwood)
- Nez Perce National Historical Park (Spalding)

Illinois

- Lewis and Clark State Historic Park (Hartford)
- Lewis and Clark Confluence Tower (Hartford)

Iowa

- Lewis and Clark Interpretive Center (Sioux City)
- Lewis and Clark State Park (Onawa)
- DeSoto National Wildlife Refuge (Missouri Valley)
- Western Historic Trails Center (Council Bluffs)
- Sioux City Public Museum (Sioux City)
- Sergeant Floyd Riverboat Museum and Welcome Center (Sioux City)
- Hitchcock Nature Center (Honey Creek)
- Southern Loess Hills Interpretive and Welcome Center (Percival)
- Dorothy Peacut Nature Center (Sioux City)
- Mills County Historical Museum (Glenwood)
- Harrison County Historical Village and Welcome Center (Missouri Valley)

Kansas

- Frontier Army Museum (Fort Leavenworth)

Missouri

- National Frontier Trails Center (Independence)
- Hermann Welcome Center (Hermann)
- Kansas City Museum (Kansas City)
- Van Meter State Park (Miami)
- Missouri History Museum (St. Louis)
- The Trailside Center (Kansas City)
- Boone County Museum (Columbia)
- Fort Osage National Historic Landmark (Sibley)
- Arrow Rock State Historic Site (Arrow Rock)
- Jefferson National Expansion Monument (St. Louis)
- The Lewis and Clark Boathouse and Nature Center (St. Charles)
- Weston Bend State Park (Weston)
- Squaw Creek National Wildlife Refuge Visitor Center (Mound City)
- Runge Nature Center (Jefferson City)
- Katy Trail State Park (Boonville)

Montana

- Lolo Pass Visitor Center (Missoula)
- Big Hole National Battlefield (Wisdom)
- Missouri Headwaters State Park (Bozeman)
- Lewis and Clark National Historic Trail Interpretive Center (Great Falls)
- Pompeys Pillar National Monument (Pompeys Pillar)
- The People's Center (Billings)
- Museum of the Plains Indian (Browning)
- Beaverhead County Museum (Dillon)
- Canyon Ferry Visitor Center (Helena)
- Dillon Visitor Information Center (Dillon)
- Fort Peck Assiniboine and Sioux Cultural Center and Museum (Popular)
- Giant Springs State Park (Great Falls)
- Headwaters Heritage Museum (Three Forks)
- Little Bighorn National Monument (Crow Agency)

- Missouri Breaks Interpretive Center (Benton)
- Montana Historic Society Museum (Helena)
- Museum of the Rockies (Bozeman)
- Ninepines Museum of Early Montana (Charlo)
- Polson-Flathead Historical Museum (Polson)
- Ravalli County Museum (Hamilton)
- St. Labre Mission and Cheyenne Indian Museum (Ashland)
- Western Heritage Center (Billings)
- Yellowstone Gateway Museum (Livingston)
- Lodgepole Gallery and Tipi Village (Browning)
- Montana Museum of Art and Culture (Missoula)

Nebraska

- Niobrara State Park (Niobrara)
- Fort Atkinson State Historic Park (Fort Calhoun)
- Lewis and Clark National Historic Trail Headquarters and Visitor Center (Omaha, Midwest Regional Office)
- Missouri River Basin Lewis and Clark Interpretive Trails and Visitor Center (Nebraska City)
- Fontenelle Forest Nature Center (Bellevue)
- Sarpy County Museum (Bellevue)
- Lewis and Clark Visitor Center at Gavin's Point (Crofton)
- Ponca State Park (Ponca)
- Indian Cave State Park (Schubert)
- Joslyn Art Museum (Omaha)
- The Durham Museum (Omaha)

North Dakota

- Fort Union Trading Post National Historic Site (Williston)
- Knife River Indian Villages National Historic Site (Stanton)
- Fort Mandan North Dakota Lewis and Clark Interpretive Center (Washburn)
- Fort Abraham Lincoln State Park (Mandan)
- North Dakota Heritage Center (Bismarck)
- Three Affiliated Tribes (New Town)
- Missouri-Yellowstone Confluence Interpretive Center (Williston)

Oregon

- Lewis and Clark National Historic Park (Astoria)
- Columbia Gorge Discovery Center (Dalles)
- Tamastlikt Cultural Institute (Pendleton)
- Fort Stevens State Park Museum (Hammond)
- Bradford Island Visitor Center at Bonneville Lock and Dam (Locks)
- Columbia River Maritime Museum (Astoria)
- Fort Dalles Museum (Dalles)
- McNary Lock and Dam (Umatilla)
- Columbia River Gorge National Scenic Area Office (Hood River)
- Seaside Museum and Historical Society (Seaside)
- Tillamook County Pioneers Museum (Tillamook)
- Cannon Beach History Center and Museum (Cannon Beach)
- Multnomah Falls Visitor Center (Hood)
- The Dalles Dam Visitor Center (Dalles)
- Hood River County History Museum (Hood River)
- Vista House at Crown Point State Park (Cornett)
- Oregon Historical Society and History Center (Portland)
- Historical Society of Columbia County Museum (St. Helens)

South Dakota

- Akta Lakota Museum and Cultural Center (Chamberlain)
- South Dakota Cultural Heritage Center (Pierre)
- Oahe Dam Visitor Center (Road Pierre)
- Lewis and Clark I-90 Information Center (Chamberlain)
- Dakota Territory Museum (Yankton)
- Buffalo Interpretive Center (Lower Brule)
- Lewis and Clark Lake Visitor Center-Missouri National Recreation Area Headquarters (Yankton)

Washington

- Columbia Pacific Heritage Museum (Ilwaco)
- Columbia Gorge Interpretive Center (Stevenson)
- Maryhill Museum (Goldendale)
- Sacajawea Interpretive Center (Pasco)
- Alpowai Interpretive Center (Clarkston)
- Columbia River Exhibition of History, Science, and Technology (Richland)
- Fort Walla Walla Museum (Walla Walla)
- Ice Harbor Dan and Visitor Center (Pasco)
- Lewis and Clark Interpretive Center at Cape Disappointment (Ilwaco)
- Wanapum Heritage Center (Beverly)
- Yakama Nation Cultural Heritage Center (Toppenish)
- Knappton Cove Heritage Center (Naselle)
- Forest Service Information Center at Skamania Lodge (Stevenson)
- Fort Columbia State Park (Naselle)
- Ridgefield National Wildlife Refuge (Ridgefield)
- Cathlapotle Plankhouse (Ridgefield)
- McNary National Wildlife Refuge Visitor Center (Burbank)
- Clark County Historical Museum (Vancouver)
- Fort Vancouver National Historic Site (Vancouver)
- Cowlitz County Historical Museum (Kelso)

B6. The Lewis and Clark National Historic Trail maintains a list of certified sites that were important in the planning or execution of the Expedition. Several certified sites are located along the eastern travels of Lewis and Clark.

State	Name of Site	Management	Date Certified
VA	Monticello	Thomas Jefferson Foundation	1/15/02
WV	Harpers Ferry National Historical Park	NPS	3/15/03
PA	American Philosophical Society	American Philosophical Society	8/12/03
PA	The Lewis and Clark Herbarium	Academy of Natural Resources	3/12/03
PA	College of Physicians	College of Physicians	3/10/04
IN	Falls of the Ohio State Park	Indiana Department of Natural Resources	7/16/01
KY	Historic Locust Grove	Historic Locust Grove, Inc.	7/30/02
KY	Big Bone Lick State Park	Kentucky State Parks	10/18/02
KY	Filson Historical Society	Filson Historical Society	10/24/03
IL	Lewis and Clark State Memorial	Illinois Historic Preservation Agency	7/27/87
IL	Fort Kaskaskia	Illinois Historic Preservation Agency	6/19/03
MO	Red House Interpretive Center	City of Cape Girardeau	4/1/05

APPENDIX C. SALMON STUDY LIST OF POTENTIAL INDIVIDUAL SITES

Inventory of Sites Associated with the Lewis and Clark Expedition Eastern Legacy and Recommendations for Further Documentation

[Reprinted from Salmon, John S. *Lewis and Clark Eastern Legacy Study*. Rep. N.p.: United States National Park Service, 2007. Print. Please note no websites have been verified or updated.]

Public Law 108-387, passed by the U.S. Congress on October 30, 2004, authorized the Secretary of the Interior to “update . . . the 1958 Lewis and Clark National Historic Landmark theme study to determine the historical significance of the eastern sites of the Corps of Discovery expedition . . . including sites in Virginia, Washington, District of Columbia, Maryland, Delaware, Pennsylvania, West Virginia, Ohio, Kentucky, Tennessee, Indiana, and Illinois.”

To identify sites related to the expedition, the historic preservation offices in the District of Columbia and each of the above-mentioned states were contacted. The Missouri office was also contacted because the site of Camp River Dubois may now lie in that state because of the eastward shift in the channel of the Mississippi River, rather than in Illinois where Clark constructed it in 1803. The Delaware and Ohio offices reported no known sites. The District of Columbia and the states of Illinois, Indiana, Kentucky, Maryland, Missouri, Pennsylvania, Tennessee, Virginia, and West Virginia reported or confirmed associated sites.

It appears likely, based on the information derived from the survey of state historic preservation offices that most of the significant buildings and sites associated with the expedition’s Eastern Legacy have been identified already. They are listed below. Few if any other significant buildings and sites are likely to exist. The locations of campsites are unknown or obliterated, and structures used by the expedition members are similarly unknown or have disappeared as a consequence of development.

Researchers have conjectured the locations of several campsites on the Ohio and Mississippi Rivers from entries in the journals of Lewis, Clark, and John Ordway. They are not listed here, however, for several reasons. Archeological investigations have not been employed to either confirm or refute the locations, the camps generally were used only for a night or two, significant artifact deposits are unlikely to exist, and both man and nature have so altered the rivers since the expedition as to make the survival of intact artifact deposits even less likely. Even if artifacts were found, linking them to the expedition as opposed to other travelers would be a challenge. The conjectural site of Camp River Dubois (now probably located either in Missouri or under the waters of the Mississippi), however, is listed below because it may be an exception to the foregoing considerations and because it is extremely important historically. The conjectural site in Missouri has not undergone archeological testing, but since the camp was occupied for several months, the likelihood of artifact deposits may be higher than for the overnight bivouacs. The eastward movement of the Mississippi River channel may well have obliterated or submerged the site, but the existence of this property cannot be ruled out definitively. The winter encampment is very well interpreted at the Lewis and Clark State Historic Site in Illinois.

Other sites were mentioned in the journals but were not apparently visited by Lewis or Clark and therefore did not contribute significantly to the eastern phase of the expedition. Cantonment Wilkinson, located in Illinois near the confluence of the Ohio and Mississippi Rivers, is an example. Just a few years before the expedition began, this post held more soldiers than any other in the United States. By 1803, it had been abandoned, some of the troops reassigned to Fort Massac, and the buildings left for civilian use. Although Lewis mentioned that the party passed what had come to be called Wilkinsonville on the way to the mouth of the Ohio, the settlement seems not to have played a role in the expedition. In 2003-2004, the Center for Archaeological Investigations, Southern Illinois University, found significant deposits on the site dating to its use as a military post.

Lewis also mentioned geological features in his journal, such as the entries of November 26-27, 1803, pertaining to what he called the Grand Tower (now known as Tower Rock) on the Mississippi River. Although these natural features are of interest, they did not play a role in the planning of the expedition, nor are they human cultural resources or sites of scientific inquiry such as Big Bone Lick. They were therefore not included in this survey of sites.

The following properties, listed in alphabetical order by state, are associated with the Lewis and Clark Expedition Eastern Legacy. In many cases, however, the associations are slight, and the properties that are listed or designated have attained official recognition for other associations. The level of documentation, status of on-site interpretation, and potential for nomination or designation are noted for each site.

1 White House, Washington, D.C.

Designated a National Historic Landmark in 1960.

Robert F. Fenton completed the original nomination form on August 13, 1959, and Priya Chhaya completed a form updated to include Criterion I on August 7, 2003. The descriptive part of the latter form is less than a page in length, and the statement of significance consists of four short paragraphs. Neither form mentions the planning for the Lewis and Clark Expedition that took place in the White House. No on-site interpretation regarding the expedition is known to exist.

Recommendation: If this form is updated to meet current standards for NHL documentation, then the planning for the expedition that took place in the White House should be discussed thoroughly.

2 Fort Kaskaskia State Historic Site, Ellis Grove, Randolph Co., Illinois

The site of the fort, which is in a state park, is not listed in the National Register of Historic Places.

The park contains the remnants of Fort Kaskaskia, a cemetery, a campground, and a Mississippi River overlook. According to information on the Fort Kaskaskia State Historic Site Web site (www.illinoishistory.gov/hs/fortkaskaskia) and the Illinois Historic Preservation Agency Web site (www.state.il.us/hps/ps), periodic flooding of the river obliterated much of the site in the 1880s and 1890s, including the town of Kaskaskia. There are on-site interpretive markers, as well as nearby state highway markers, but the association of the site with the Lewis and Clark expedition does not appear to be mentioned. If the opportunity arises to replace the markers or add to them, this information could be presented.

3 Fort Massac Site, Ohio River near Metropolis, Illinois

Listed in the National Register of Historic Places in 1971.

The nomination form does not mention Lewis and Clark, the hiring of interpreter George Drouillard, or the recruiting of soldiers for the expedition there. The site is located in Fort Massac State Park; the official park Web site (www.dnr.state.il.us/lands/landmgt/Parks/R5/frmindex) likewise does not mention the expedition. Archeological investigations were conducted at the site between 1939 and 1942, and again in 1966, 1970, and 2002. The outline of the original French fort (ca. 1757) is marked, and a reconstruction of the ca. 1802 American fort was erected in the park in 2002. Although the park does not specifically interpret the Lewis and Clark Expedition, it does interpret the post and soldiers' lives during the same period of time.

Recommendation: If the existing National Register nomination is updated, it should include documentation of the Lewis and Clark expedition as it relates to the fort, and should utilize the information obtained from the various archeological investigations.

4 Old Cahokia Courthouse, Cahokia, Illinois

Listed in the National Register of Historic Places in 1972.

The nomination form does not mention Lewis and Clark or the courthouse's role as a town center and post office. The Cahokia Courthouse Web site (www.illinoishistmy.gov/hs/cahokia_courthouse) likewise does not mention the expedition. Although the building is located on its original site, it has been moved twice and extensively reconstructed. Nonetheless, it appears to retain the appearance it had when Lewis and Clark saw it.

Recommendation: If the existing National Register nomination is updated, it should include documentation of the Lewis and Clark Expedition as it relates to the courthouse.

5 Old Clarksville Site, Clark Co., Indiana

Listed in the National Register of Historic Places in 1974.

The nomination form does not mention the Lewis and Clark Expedition or the meetings there between the explorers and George Rogers Clark at his cabin as they were outward bound in 1803 or homeward bound in 1806. The nomination further states that no archeological investigations had taken place around the probable cabin site, with the presumption that it either had been washed away or obliterated by river improvements. A visitor to the site in 1805, however, wrote that the cabin was on a point "commanding" a view of the falls, implying that it stood on high ground. The cabin site is in the Falls of the Ohio State Park, and the site is marked on a map of the park, which might suggest that its location has been confirmed. The Indiana Division of Historic Preservation and Archaeology, however, reported that the map only represents the area in which the cabin is believed to have been. The office also reported that an archeological survey conducted in the area in 1974 did not confirm "the exact location of the George Rogers Clark cabin site although it is believed to be within the Old Clarksville Site boundary." Subsequent testing in the area (not specifically related to the cabin) has likewise failed to uncover the cabin location. The National Park Service Web site (www.cr.nps.gov/m/traveVlewisandclark/ocs) relating to the expedition describes Lewis and Clark's visits there.

Recommendation: An archeological survey of the point, which is still extant, might prove informative. If the existing National Register nomination is updated, it should include documentation of the Lewis and Clark Expedition as it relates to the site (although there are virtually no contemporary accounts of the explorers' visits there).

6 Big Bone Lick State Park and Archaeological Site, Union, Kentucky

Listed in the National Register of Historic Places in 1972 (State Park) and 2002 (Archaeological Site).

The nomination for the state park does not mention Meriwether Lewis's visit in 1803, although it does touch briefly on William Clark's subsequent excavation there in 1807, which it refers to as "the first organized vertebrae paleontology [sic] expedition in the United States." The nomination for the archeological site (state park boundary expansion) touches briefly on Lewis's visit in the context of early excavations and studies of the bones. In fairness, there is no contemporary account of Lewis's visit in 1803. His often-cited letter of October 3, 1803, in which he described mammoth bones to Jefferson, was written a day or two before Lewis visited the Lick, and the bones he described were in Cincinnati in the collection of Dr. William Goforth. Much more is known about Clark's expedition of 1807.

Recommendation: Perhaps a marker could be placed at the site to commemorate Lewis's visit.

7 Locust Grove, 561 Blankenbaker Lane, Louisville, Kentucky

Designated a National Historic Landmark in 1986.

The nomination, which contains less than a page of historic context, merely lists Lewis and Clark among the many visitors to the house.

Recommendation: If the existing nomination is updated, it should include documentation of the Lewis and Clark Expedition as it relates to the site (although there are virtually no contemporary accounts of the explorers' visit there except for a neighbor's brief diary entry).

8 Mulberry Hill Site, George Rogers Clark Park, Louisville, Kentucky

The site of Mulberry Hill, the Clark family home in Kentucky, is located in George Rogers Clark Park. A family cemetery has been identified and remnants of a spring house are still visible, although all of the other outbuildings and the deteriorated main house were demolished in 1917. At least one photograph exists of the Clark house, taken ca. 1890. Two archeological investigations have taken place there, the first by Phil DiBlasi of the University of Louisville in 1982, and a more extensive survey in 2003, conducted by Lori Stahlgren and M. Jay Stottman, staff archeologist for the Kentucky Archaeological Survey. The 2003 survey did not succeed in finding foundations associated with the house or outbuildings. Mr. Stottman concluded (personal communication, Aug. 14, 2006) that "although it appears that much of the site is disturbed, we feel that there are intact deposits present at the site and that more can be learned by conducting more extensive archaeological excavations." The site has not been evaluated for eligibility for listing in the National Register. A state historical marker in the park provides a brief outline of the history of the site, and an even briefer mention of the Lewis and Clark Expedition.

Recommendation: Install one or more comprehensive on-site interpretive markers, making use of the available illustrative material (photograph of the house, portraits of Lewis and Clark as well as of George Rogers Clark) to tell the story of the site and its relationship to the settlement of Louisville and to the Lewis and Clark Expedition.

9 Hessian Barracks, Maryland School for the Deaf, 242 S. Market St., Frederick, Maryland

Listed in the National Register of Historic Places in 1971.

The nomination does not mention the Lewis and Clark Expedition, the fact that Lewis's supply wagon passed through on its way to Harpers Ferry from Philadelphia, that Lewis came to Frederick, or that he received assistance there in recruiting soldiers for part of the expedition.

Recommendation: If the existing nomination is updated, it should include documentation of the Lewis and Clark Expedition as it relates to the site. An on-site interpretive marker relating to the expedition would also be useful.

10 Camp Wood (Camp River Dubois), near Edward "Ted" and Pat Jones Confluence, Point State Park, Missouri

Conversations with Theodore Hild, chief of staff in the Illinois Historic Preservation Agency, and with the staff of the Missouri Division of State Parks and Historic Sites in the Department of Natural Resources, suggest that the site of Camp River Dubois has been identified by comparing historic and modern maps. No archeological investigations of the site have been conducted. It appears likely that the movement of the Mississippi River channel over the site from west to east has scoured it clean of any artifact deposits. As a result of the channel's movement, the site may

now be in Missouri just north of the Edward "Ted" and Pat Jones Confluence Point State Park, rather than in Illinois, where William Clark had the camp constructed in December 1803. There is at present no on-site interpretation. Across the river in Illinois, however, Camp River Dubois is interpreted at the Lewis and Clark State Historic Site in Hartford, about two miles downstream from the supposed actual site. The museum there contains a full-scale cutaway model of the keelboat, reproductions of camp cabins, other exhibits, and a great deal of interpretive material about the camp and the expedition. The Lewis and Clark State Historic Site maintains a Web site at www.campdubois.com. The site superintendent, Brad Wynn, believes that the actual site of the camp may be in the Mississippi River rather than in Missouri.

Recommendation: A marker telling the story of the camp and noting the differences of opinion regarding the exact location today could be placed near the estimated site in Missouri. The Lewis and Clark Historic Site in Illinois presents the story very well; no further action is recommended for that site.

11 American Philosophical Society, Philosophical Hall, Philadelphia, Pennsylvania

Designated a National Historic Landmark in 1965.

The nomination mentions the building briefly as the repository of many of the journals of the Lewis and Clark Expedition. No mention is made of Lewis's instruction in various useful sciences by Benjamin Rush and other Society members, or of Lewis's induction into the Society before he crossed the Mississippi River. Besides the journals, the Society for a long time held the botanical specimens that Lewis and Clark collected, but then at the end of the nineteenth century transferred them to the Academy of Natural Sciences in Philadelphia.

Most of the botanical, zoological, and ethnological specimens collected during the expedition have been lost. Although several repositories have claimed to have specimens in their collections, only in a few cases is the provenance clear and indisputable. The botanical specimens largely were pressed and dried, and most of the surviving examples are stored on 226 sheets in the Lewis and Clark Herbarium at the Academy of Natural Sciences, with notes in Lewis's or Clark's hand as to the place and date of collection. Several other sheets are at the Royal Botanic Gardens at Kew, in London, England. Almost all of the zoological specimens have disappeared. Jefferson kept a few at Monticello, but Lewis gave most of them to Charles Willson Peale for Peale's American Museum in Philadelphia, where they were exhibited for a time in Independence Hall. The showman P. T. Barnum bought the collection from Peale's heirs in 1848 and installed it in his New York museum, which was destroyed by fire in 1865. The only known specimen to survive, a woodpecker, is in the Harvard University Museum of Comparative Zoology. A larger number of the ethnological specimens are still extant. Jefferson kept a few at Monticello while Lewis donated most to Peale's museum. When the Peale collection was dispersed in 1848, Barnum acquired about half of them for his New York museum that burned in 1865. Moses Kimball got the other half, and his heirs eventually donated the artifacts to the Peabody Museum of Archaeology and Ethnology at Harvard University, where they remain today. The specimens include buffalo robes, tobacco pipes, cradles, women's apparel, hats, arrows, an elk antler bow, and musical instruments.

Recommendation: If the National Historic Landmark documentation is ever updated, more could be written about Lewis's time in Philadelphia and his instruction at the hands of the Society members.

12 Andrew Ellicott House, 123 N. Princess St., Lancaster, Pennsylvania

Listed in the National Register of Historic Places in 1972.

The nomination barely mentions Ellicott's role in instructing Lewis at the house before the expedition began.

Recommendation: If the National Register nomination documentation is ever updated, use should be made of Lewis's and Ellicott's letters to Thomas Jefferson to describe more fully Ellicott's essential role in training Lewis in the use of scientific instruments.

13 Fort Southwest Point Archaeological Site, Kingston, Tennessee

Listed in the National Register of Historic Places in 1972.

The nomination makes no mention of the fort's role in furnishing volunteers for the Lewis and Clark Expedition. The Tennessee Division of Archaeology, in the state's Department of Environment and Conservation, has published a detailed report on the site, however: *Fort Southwest Point Archaeological Site, Kingston, Tennessee: A Multidisciplinary Interpretation* (1993). Note 14, on pp. 107-108, discusses the men who joined the expedition from the fort and gives details of their service.

Recommendation: A historical marker describing the fort's role in the expedition, placed in the vicinity of the fort site, would be appropriate.

14 Meriwether Lewis Monument, Natchez Trace Parkway, Hohenwald, Tennessee

Determined eligible for listing in the National Register of Historic Places in 2004.

The Determination of Eligibility is based on the “National Register Eligibility Assessment, The Natchez Trace Parkway” prepared for the Tennessee Department of Transportation in 2004. The assessment describes the monument and its associated resources without referencing the Lewis and Clark Expedition or the circumstances of Lewis’s death. Among the resources at the monument is a log-cabin museum that contains exhibits about Lewis’s career, and there are also interpretive markers on the site.

Recommendation: If a National Register nomination is written for the Natchez Trace Parkway or the monument, additional documentation about Lewis, the expedition, and his death should be included.

15 Fincastle Historic District, Botetourt County, Virginia

Listed in the National Register of Historic Places in 1969.

The nomination makes no reference to the Lewis and Clark Expedition, the visits of Lewis or Clark, or the celebration held there in 1807.

Recommendation: If the National Register nomination is revised, the connection of William Clark to the town and the celebration held there in 1807 should be documented. A historical marker placed in the vicinity of the courthouse also would be appropriate.

16 Locust Hill Site, Albemarle County, Virginia

Here Meriwether Lewis was born in 1774. The birth house no longer stands, but the family cemetery is still maintained, and a small marker on the road commemorates Lewis’s birth there. The site has not been evaluated for National Register eligibility. The Virginia Department of Historic Resources has an extensive file on the property (DHR File 2-106). A log dwelling was constructed supposedly on the foundation of the original structure shortly after a ca. 1837 fire destroyed the house in which Lewis was born. The ruin of a slave quarters was the only other pre-1900 structure identified on an architectural survey form completed in 1979.

Recommendation: Because the site is on private property, the owner must give permission before any archeological investigation could be undertaken or the property could be evaluated for National Register eligibility. Since a plaque already has been placed near the site to commemorate Lewis, no additional interpretive marker is necessary.

17 Monticello, Albemarle County, Virginia

Designated a National Historic Landmark in 1960.

The nomination mentions the Lewis and Clark Expedition but contains no reference to Lewis’s service as Jefferson’s secretary or his inclusion in Jefferson’s “family” or the planning for the expedition that took place at Monticello.

Recommendation: If the nomination is updated, the role of Lewis as Jefferson’s secretary and the research and planning for the expedition that took place at Monticello should be documented.

18 William Clark Birthplace Site, Caroline County, Virginia

The actual site of the Clark dwelling has not been identified, nor has the farm site undergone archeological investigation. In 1996, the general location of the farmstead was identified through deed research and the platting of metes and bounds. A state historical highway marker was erected nearby to commemorate Clark's birthplace, and another marker commemorates the Clark family farm. The site has not been evaluated for National Register eligibility.

Recommendation: Because the site is on private property, the owner must give permission before any archeological investigation could be undertaken or the property could be evaluated for National Register eligibility. Since two state highway markers already have been placed near the site to commemorate Clark and the farm, no additional interpretive marker is necessary.

19 Grave Creek Mound, Moundsville, West Virginia

Listed in the National Register of Historic Places in 1966.

The nomination refers in passing to the fact that Lewis visited the site but does not mention the description of the mound in his journal. There is no interpretation of his visit at the Grave Creek Mound Archaeology Complex, which interprets the site in a prehistoric context, except for a reference in a time line of the history of the site.

Recommendation: If the nomination is updated, a more detailed reference to Lewis's visit and his description of the site could be documented. An interpretive marker could also be placed nearby.

20 Harpers Ferry National Historical Park, West Virginia

Listed in the National Register of Historic Places in 1966.

The nomination does not mention the Lewis and Clark Expedition, Lewis's visits in 1803, or the armory's role in making the iron frame for Lewis's canoe or the weapons carried on the expedition. It does include an account of the armory's development early in the 1800s as well as detailed descriptions of the buildings that stood there in 1803. Only the foundation remains of the large arsenal building (constructed ca. 1799-1800) but the Robert Harper Tavern of about 1775-1782 survives.

Recommendation: If the nomination is updated, the role of the armory in supplying weapons and the iron frame for the canoe should be documented. An interpretive marker at the site of the armory would be appropriate.

21 Wellsburg Historic District, West Virginia

Listed in the National Register of Historic Places in 1982.

The town of Wellsburg was the home of Patrick Gass, the only member of the expedition from the eastern United States whose dwelling has been identified. He is also notable for having published the first account of the expedition; his journal was edited and rushed into print in 1807, much to Lewis's irritation. Gass, the last surviving member of the Corps of Discovery, died on April 2, 1870, and is buried in Wellsburg's Brooke Cemetery, which is listed in the National Register with exploration and settlement as an area of significance for the cemetery's association with Gass. His is one of only two identified burial sites of an expedition member interred east of the Mississippi River (with the other being Lewis). The historic district

nomination mentions Gass briefly as an expedition member and describes his house as consisting of a two-story frame dwelling constructed about 1850, with an older frame rear ell dating to about 1797. According to Larry E. Morris, *The Fate of the Corps: What Became of the Lewis and Clark Explorers after the Expedition* (New Haven, Conn.: Yale University Press, 2004), pp. 181-185, however, Gass lived on a farm outside Wellsburg for many years after returning to the area about 1830. Nearly sixty years old, he then married, and he and his much younger wife had seven children. After she died in 1847, he remained at the farm for a few years and then went to live with a married daughter, from whose house he walked the four miles to the post office in Wellsburg almost daily. It is unclear, then, if his daughter lived four miles outside the town-at what point Gass resided in the Wellsburg house, because the historic district nomination does not say.

Recommendation: If the National Register nomination is updated, more information concerning Gass (and specifically when he lived in the house) could be included. An interpretive marker placed near the house would be appropriate.

APPENDIX D. NHL REVISED THEMATIC FRAMEWORK

The following themes and subthemes would likely apply to the proposed trail extension:

I. Peopling Places

1. family and the life cycle
2. health, nutrition, and disease
3. migration from outside and within
5. ethnic homelands
6. encounters, conflicts, and colonization

III. Expressing Cultural Values

1. educational and intellectual currents
3. literature
4. mass media
5. architecture, landscape architecture, and urban design

IV. Shaping the Political Landscape

1. movements
2. governmental institutions
3. military institutions and activities
4. political ideas, cultures, and theories

V. Developing the American Economy

1. extraction and production
2. distribution and consumption
3. transportation and communication
6. exchange and trade
7. governmental policies and practices

VI. Expanding Science and Technology

2. technological applications
3. scientific thought and theory
4. effects on lifestyle and health

VII. Transforming the Environment

1. manipulating the environment and its resources
2. adverse consequences and stresses on the environment
3. protecting and preserving the environment

VIII. Changing Role of the United States in the World Community

1. international relations
2. commerce
3. expansionism and imperialism
4. immigration and emigration policies

APPENDIX E. FURTHER INFORMATION ON THE EXISTING LEWIS AND CLARK NATIONAL HISTORIC TRAIL

Lewis and Clark National Historic Trail – Administrative/ Business Services

Administrative Organizational Structure

The administrative division of the Lewis and Clark National Historic Trail (the trail) consists of a two-person team led by the administrative officer.

Responsibilities of the administrative division:

- Provide the Lewis and Clark NHT leadership team accurate budgetary guidance and progress throughout the fiscal year so that priorities and planning can be done successfully
- Monitor the progress of all reply dues and requests for information
- Regularly provide insight on regulatory guidance and deadlines in areas of budget, contracting, and human resources
- Issue and route correspondence internally and externally
- Monitor multiple internal controls
- Ensure all utility and supply needs are fulfilled
- Issue and monitor accountable and non-accountable property

Positions

Administrative Officer: This position is supervised by the park superintendent, serves as the chief of the administrative division, and manages the administrative and business operations of the trail. This position serves as the principal advisor and management consultant to the superintendent and park management team for administrative matters. Actively leads the administrative assistant position and coordinates with other division leaders on programs and projects; and drafts trailwide administrative regulations, operational standards, and standard operating procedures under the superintendent's guidance. Provides and seeks clear guidance on budget, human resources, contracting, and travel issues. Plans, analyzes, and monitors the formulation and development of trailwide plans.

Administrative Assistant: Deposits the trail's donations and money received from trail passes, validates time cards, and verifies all charge card purchases. Actively tracks expenditures and obligations on a regular basis. Pays invoices and utility bills and purchases appropriate supplies for trail staff. Ensures that all property is numbered and accounted for. Tracks annual required staff training.

Lewis and Clark National Historic Trail – Integrated Resources Stewardship

Integrated Resources Stewardship Organizational Structure

The integrated resources stewardship (IRS) division of the Lewis and Clark National Historic Trail (the trail) consists of a team of resource specialists led by the chief of resources. The team works collaboratively in an interdisciplinary manner to fulfill the responsibilities of protecting resources, ensuring compliance, carrying out planning, and collaborating through partnerships.

Responsibilities for the administration of trail resources include the following:

- Review all detailed management and use plans prepared by the federal and nonfederal jurisdictions responsible for the component sites and segments
- Encourage and assist in the implementation of the recommendations for the historic sites and segments discussed in the Comprehensive Management Plan (plan)
- Regularly monitor the status of all sites and segments identified in the plan to ascertain changes in ownership or impending developments
- Perform or arrange for basic historical and archaeological research
- As provided for in NEPA and NHPA, review and comment on pipeline, highway, utility rights-of-way, and other development proposals that may adversely affect the primary route or any sites or segments
- Arrange for and coordinate marking of the trail route

- Prepare or provide for maps, reports, books, brochures, and other interpretive publications for distribution at interpretive centers and other visitation points

Key Positions

Chief of Integrated Resources Stewardship: Serves as the chief of the IRS division; leads an integrated team of specialists; coordinates resource-based programs and projects; and drafts trailwide regulations, operational standards, standard operating procedures, and policies for resources management and outdoor recreation. Provides technical assistance, guidance, and training to partners to ensure the preservation and protection of the scenic, cultural, historical, natural, and recreation resources of the trail.

Geographer: Coordinates GIS and mapping activities for the trail. Works in concert with other IRS specialists to develop a comprehensive GIS database management system that will accommodate resource inventories, basic mapping services, and resource condition assessments/evaluations. Uses GIS and mapping to help protect natural, cultural, and recreation resources from environmental and developmental threats. Acquires, develops, and maintains geospatial information for inclusion in the trail GIS database.

Cultural Resources Specialist: Works to enhance and protect cultural resources along the trail. Conducts project compliance reviews. Leads the effort to identify and designate high potential historic sites along the trail for inclusion in the plan. Coordinates section 106 activities along the trail. Works closely with SHPOs and THPOs to ensure resource protection.

Outdoor Recreation Specialist: Works to enhance and protect recreational opportunities along the trail. Conducts project compliance reviews; works with Challenge Cost Share projects, trail development efforts, and auto tour route signs and wayshowing. Works to increase the awareness of the trail as a public recreational opportunity and a way to experience a part of history and the outdoors. Works closely with partners along the entire trail to protect and enhance recreational opportunities.

Environmental Protection Specialist: Develops and implements a program to protect trail resources. Expands and monitors a network of information sources to alert the trail about proposed actions that may impact trail resources and opportunities for involvement. Coordinates environmental reviews conducted by IRS staff. Drafts correspondence and maintains administrative record of reviews and comments. Works with the Midwest Regional Office, Intermountain Regional Office, Pacific West Regional Office, Washington Support Office, other agencies, and partners to increase awareness of the trail, its resources, and the trail's role in resource preservation and protection. Develops and implements a system to track external environmental reviews and compliance mitigation agreements.

Natural Resources Program Manager: Works to enhance and protect natural resources along the trail. Conducts project compliance reviews, acts as liaison with other federal and state resource agencies, assists partners with trail projects, promotes strategies for protecting visual resources, studies current adaptation management strategies related to climate change, and stays current with NPS natural resource policies and reporting requirements. Uses current GIS methodologies to incorporate climate modeling, habitat modeling, and viewshed analysis for resource protection. Provides natural resource oversight, ranging from biotic to abiotic components of ecosystems, in relation to conditions during the Expedition.

Significant Projects

- **High Potential Historic Sites** - IRS staff are currently leading the effort to identify and designate high potential historic sites, as an amendment to the plan. The team mapped and compiled information on numerous historic sites along the trail; solicited input from a number of representatives from the trail community, including SHPOs, tribes, members of the Lewis and Clark Trail Heritage Foundation and the Lewis and Clark Trust, and staff from several agencies; and developed guidance to help analyze significance, interpretive potential, and current condition of each site.
- **High Potential Route Segments** - Staff are currently working to develop criteria for analyzing and designating high potential route segments as an amendment to the plan. The team is mapping and compiling information along several trail segments for analysis and potential designation.
- **Trail Interactive Atlas** - IRS staff worked with the NPS Denver Service Center to create a dynamic, interactive, user-friendly web map that is used as a planning tool for agency staff and partners, as well as a portal into the world of Lewis and Clark for the public. Atlas users can view a multitude of different data layers, including historic Expedition data; display a variety of base maps; click links to more information; and draw, add text, and export their own custom maps. There is tremendous potential for the Atlas to be used as an educational tool in the classroom.

- **Auto Tour Route Signage and Wayshowing** – The NPS is responsible for signing the 6,157-mile system of highways and roads along the route known as the Lewis and Clark Auto Tour Route. An inventory of the signs along the auto tour route was completed in a Cooperative Ecosystem Studies Unit project with the University of Wyoming in 2009. In 2013, a plan titled *Effective Wayshowing for Enhanced Visitor Experience, Lewis and Clark National Historic Trail and Auto Tour Route* was developed and staff are currently engaging the department of transportation offices in trail states to begin implementing the plan’s recommendations.
- **State of the Trail Segment (Sioux City, Iowa to Pickstown, South Dakota)** - In 2012, IRS staff began collecting data and gathering information for the Sioux City, Iowa to Pickstown, South Dakota segment of the trail. Staff collected field data on resource conditions in this segment with the aid of partners and volunteers. Resource conditions were assessed in the field and changes from the 1982 Comprehensive Management Plan were evaluated at 22 sites. A State of the Trail Segment Report was developed to provide a snapshot of the status and trends in the condition of trail resources; summarize and communicate scientific information, scholarly research, and expert opinion using nontechnical language; highlight stewardship activities and accomplishments; and identify key issues and challenges facing the trail in this segment.
- **Historic Route Mapping** – IRS staff have been engaged in collaborating geographers and Lewis and Clark scholars on mapping the historic route of the Expedition. A project with Jim Harlan with the University of Missouri Department of Geography began in 2009 to cartographically reconstruct the historic channel of the Missouri River and identify the course and distance, observation locations, and campsites recorded in the journals of Lewis and Clark. The entire historic route along the Missouri River was completed in 2012. Further research and mapping has taken place on the overland portions of the trail with the aid of Dr. Steve Russell, Professor Emeritus with Iowa State University.
- **Cultural Resources** - IRS staff are collaborating with 11 SHPOs and 14 THPOs to facilitate the protection of trail cultural resources. Trail-related sites on the National Register have been identified, described, and mapped. Staff is currently engaging various SHPOs to list the historic route corridor as a registered property in their databases to ensure notification should new developments occur.
- **Natural Resources** - IRS staff conducted an analysis of the contemporary composition of land use, ecosystems, and conservation status along the trail with The Wilderness Society. A quantitative assessment of the condition and character of the landscape immediately surrounding the trail was completed, which included an investigation of land cover, vegetation condition, conservation protection, and a summary of landscape qualities. Staff actively updates and acquires current climate data for incorporation into the GIS database for climate change modeling and development of adaptation management strategies.

- **Story Maps** - IRS staff have embraced the Environmental Systems Research Institute (ESRI) Story Map platform to create lightweight applications that combine web maps with multimedia content to share stories and present geographic information to a wide audience. Multiple story maps have been created and shared with the public, covering a wide variety of

topics including *Lewis and Clark's Scientific Discoveries*, *The Missouri River: Then and Now*, *National Register Sites Along the Lewis and Clark Trail*, and *The Volcanoes of Lewis and Clark*. These story maps are among the most popular available on the Internet today and are currently used as flagship examples in ESRI Story Map webinars, training, and presentations.

Lewis and Clark National Historic Trail – Interpretation, Education, and Visitor Services

Interpretation, Education, and Visitor Services Key Positions

Chief of Interpretation: Supervises visitor center staff, volunteer program manager, education specialist, and interpretive specialist. Works to communicate with trail partners to help with the interpretive, educational, and volunteer needs to better serve the trail. Connects with partners to further the mission of the trail and enhance the visitor experience.

Visitor Center Operations Manager: Visitor center operations consist of a supervisory park ranger and four park guides that service the Omaha metro area through the Midwest Regional Office and Lewis and Clark National Historic Trail headquarters building. The visitor center has a book store in partnership with Western National Parks Association and has an average annual visitation of 21,000 visitors. In addition to the visitors, the visitor center provides outreach to the Omaha area, with school groups, interpretive programs, and special public events. The visitor center operations also manage the local and trailwide Junior Ranger program.

Volunteer Program Manager: Manages, plans, develops, and executes all aspects of the Trail VIP program; assists partners in identifying needs for volunteerism and determining best recruitment methods; and provides training opportunities for Trail Volunteer in Parks (VIP) coordinators and managers as well as volunteers. Assists partners with grant writing and searching for funding resources

for volunteer activities. Collaborates with other trails and volunteer partners programs nationwide, administers the Lewis and Clark National Historic Trail volunteer management budget, ensures that partners maintain effective tracking of accomplishments in the volunteer program, and analyzes information for annual volunteer reports to determine the effectiveness and efficacy of individual park/organization volunteer programs. Works with visitor centers and various partner groups along the trail to report hundreds of thousands of volunteer hours annually.

Interpretation Specialist: Provides technical assistance for planning and implementing interpretive exhibits, media, and programs; guides interpretive planning and production; assists in writing, reviewing, and commenting of interpretive materials/media; conducts research in natural and cultural history associated with Lewis and Clark for the development of interpretive programming and media; and designs, develops, and coordinates and provides interpretive training to cooperating agencies and partner organizations. Acts as contributing editor for the trail newsletter; and serves as trail subject matter expert for nonpersonal services, including graphic design, development, and fabrication. Manages social media on twitter and coordinates trailwide conference calls (trail talk) on a quarterly basis.

Education Specialist: Provides curriculum development assistance and review for formal and informal educators; researches and analyzes Lewis and Clark education resources; integrates the American Indian perspective of Lewis and Clark curriculum; assists with education programming and reviews specializing in place-based education, inquiry-based learning, and primary resource incorporation; conducts meetings with trail agency personnel and trail partner organizations relating to tribal, private, and public schools and the various states' curricula; and initiates meetings with state, tribal, and school representatives to discuss curriculum related to Lewis and Clark. Provides technical advice on educational activities or proposals; represents the trail at education-related programs with other organizations; and ensures that programs are based in appropriate state or national teaching standards, such as National Science Standards or National Social Studies Standards and Common Core. Successfully coordinated the development of a very large project called Honoring Tribal Legacies, which focused on encouraging curricula that honors tribal perspectives.

Park Rangers, Park Guides, Visitor Use Assistants, and Various Interns: The Lewis and Clark National Historic Trail also employs a number of staff who are focused on direct service to the public in the Omaha Visitor Center. These staff prepare and deliver programs, sell trail passes, and provide information on the trail and all other NPS areas. These staff also help with the management and operation of Riverfront Books, the bookstore.

American Indian Liaison

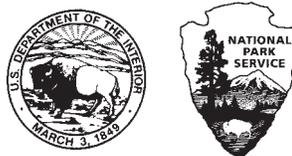
The trail has one full-time senior-level employee who focuses on tribal relationships and issues with all of the trail tribes. This position reports directly to the trail superintendent and works across all divisions (interpretation, education, and natural and cultural resources) to ensure a coordinated and inclusive approach is being taken to all projects and activities.

Approximately 4,395 miles of trail extends from Wood River, Illinois to the Pacific Ocean near Astoria, Oregon. The trail traverses three NPS regions and 11 states and the homelands of 113 historic tribes, as well as 199 federal, 201 state, and 124 local government entities.

The tribal liaison works to bring awareness of how the tribal stories intertwine with those related to Lewis and Clark's travels as depicted in the interpretive/educational initiative of the Corps of Discovery II and/or related regional areas. The liaison also works to help tell and keep important stories alive.

Brief Sample of Recent Projects and Activities

- Developed an extraordinary curriculum and teacher training tool: Honoring Tribal Legacies—An Epic Journey of Healing,
- Coordinated the interaction with tribes along the trail and other affiliated NPS sites,
- Facilitated communications with tribes and other governments and organizations,
- Provided technical assistance and training concerning American Indian culture to the NPS and other external organizations,
- Consulted on a project in Cannon Beach, Oregon to help preserve the NeCus's ancestral village site of the Clatsop-Nehalem people,
- Promotes, actively seeks, and coordinates participation of American Indian sovereign nations in developing and interpreting their stories of the trail and Lewis and Clark,
- Develops and maintains a public relations program with members of tribal nations, and
- Reviews and comments on sovereign nation's proposed projects that have potential effects on national trails.



As the nation’s principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

EXPERIENCE YOUR AMERICA



EXTENSION STUDY
Lewis & Clark National Historic Trail